## Rust Environment & Infrastructure Inc.

A Rust International Company 5575 DTC Parkway, Suite 200 Englewood, CO 80111 Phone 303.694.6660 Fax 303.694.4410

June 25, 1998

Serial Letter No. TERC1-19-0161 RD

Ms. Linda White, P.E.
Technical Project Manager
U.S. Army Corps of Engineers-Omaha District
ATTN: CENWO-ED-EA (White)
222 South 15th Street
Omaha, Nebraska 68102

Re:

Gas Probe Monitoring Results for Landfills 2, 5, and 6 (April/May/June 1998)

Rust Project No. 55253.000 WBS Nos. 223, 231, and 321

Action Requested:

None, For Information Only

Dear Linda:

Rust Environment & Infrastructure (Rust) is pleased to present gas probe monitoring results from Landfills 2, 5, and 6. The gas probes at Landfill 2 were monitored April 1, 15, 30, May 14, and June 8, while the gas probes at Landfill 5 and 6 were monitored April 1, May 14, and June 8, 1998. Rust personnel are scheduled to perform monitoring every two weeks during the construction of the landfill caps or monthly if the construction activities are delayed more than one month. The boring logs and well completion diagrams for the wells at all three landfills are enclosed as Attachments 1 and 2.

Four gas probe monitoring wells at Landfill 2, six gas probe monitoring wells at Landfill 5, and five gas probe monitoring wells at Landfill 6 were monitored. Sampling locations for Landfill 5 and 6 were submitted with the October 1997 monitoring report, and the sampling locations for Landfill 2 are illustrated on Figure 3. The gas residing at the sample port in the gas probe monitoring wells were analyzed for lower explosive limits (LEL), hycrogen sulfide (H2S), methane, and pressure. The monitoring equipment was pre-calibrated with specified calibration gases before the sampling effort. All readings were allowed to peak and stabilize prior to recording the results. Field personnel operated under the OHM Site Specific Health and Safety Plan while performing the monitoring.

The results of the gas probe monitoring at Landfills 2, 5, and 6 are shown on Table 1. The results of the gas probe monitoring at Landfill 2 indicate an isolated detection of hydrogen sulfide at low levels in LF2-GP4 during the April 15, 1998 monitoring event. The results of the gas probe monitoring at Landfill 5 continue to show elevated readings at LF5-GP4, which are likely a result of the well being installed directly in the landfill debris. The results of the gas probe monitoring at Landfill 6 continue to show no significant detections throughout our sampling efforts.

Ms. Linda White June 25, 1998 Page 2

Please do not hesitate to contact me at (303) 694-6660 if you have any questions or require further information.

Sincerely,

RUST ENVIRONMENT & INFRASTRUCTURE

John A. England, P.E. Project Manager

Enclosures

cc:

Mr. Jim Henderson/DECAM Martin Rasmussen/USACE

Mark Scott/Rust Craig Davis/Rust

File

L:\work\USACE\55253\Work\Product\SERIAL.LTR\062598rd.ltr

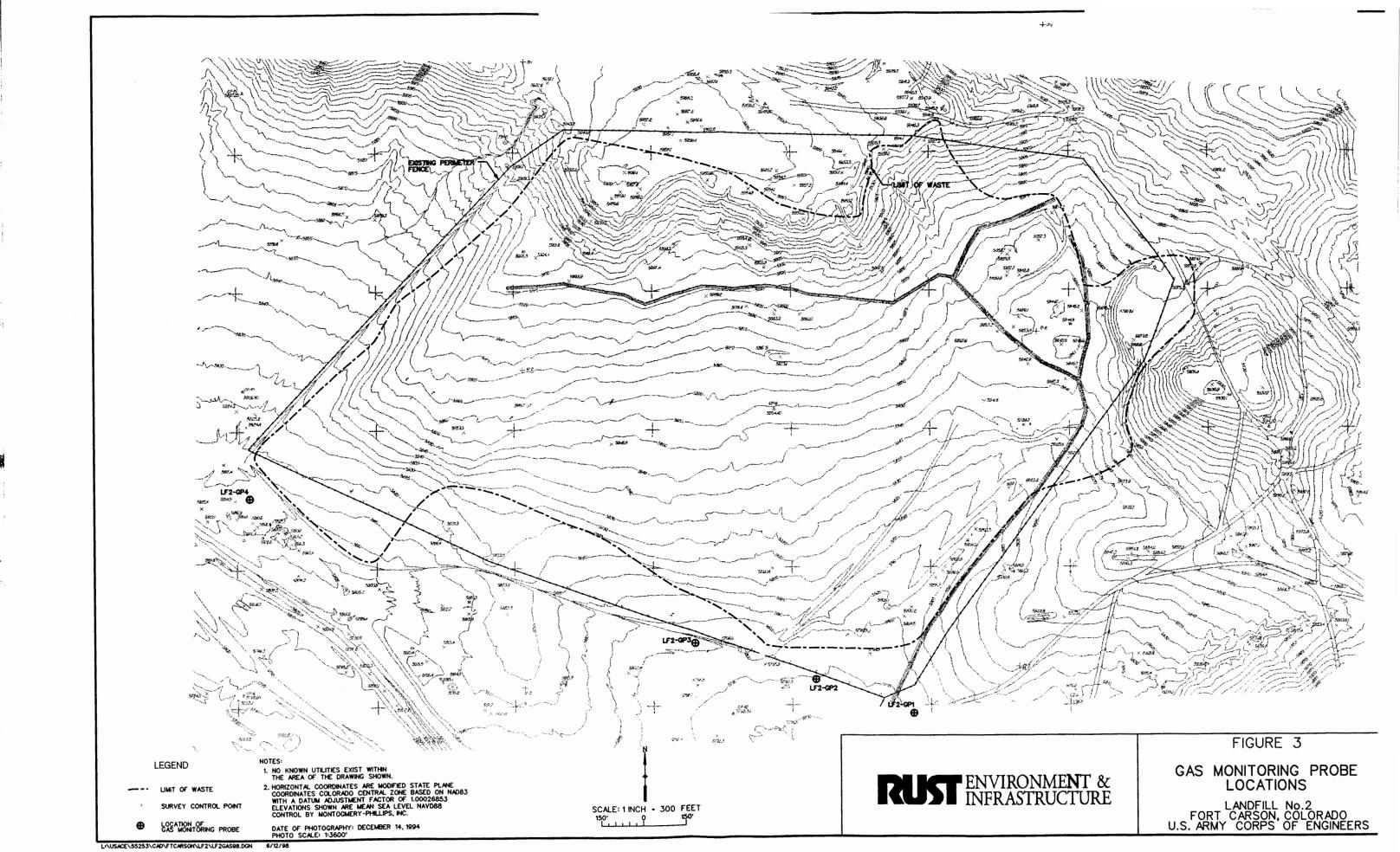
TABLE

TABLE 1
LANDFILL GAS PROBE MONITORING
FORT CARSON, COLORADO

			<u>CARSON, COL</u>		
Sample ID	Date	LEL (%)	H2S (ppm)	Methane (%)	Air Pressure (in/H2O)
Landfill 2					
LF2-GP1	4/1/98	0	0.0	0	0.05
	4/15/98	0	0.0	0	0.04
	4/30/98	0	0.0	<0.1	0.05
	5/14/98	0	0.0	0	0.06
	6/8/98	0	0.0	0	0.04
LF2-GP2	4/1/98	0	0.0	< 0.1	0.00
	4/15/98	0	0.0	< 0.1	0.01
	4/30/98	0	0.0	<0.1	0.03
	5/14/98	0	0.0	< 0.05	0.07
	6/8/98	0	0.0	< 0.05	0.02
LF2-GP3	4/1/98	0	0.0	0	0.01
	4/15/98	0	0.0	0	0.01
	4/30/98	0	0.0	<0.1	0.01
	5/14/98	0	0.0	0	0.00
	6/8/98	0	0.0	< 0.05	0.01
LF2-GP4	4/1/98	0	0.0	0	0.01
	4/15/98	0	0.5	0	0.00
	4/30/98	0	0.0	0	0.02
	5/14/98	0	0.0	0	0.03
	6/8/98	0	0.0	0	0.00
Landfill 5				-	0.00
LF5-GP1	4/1/98	0	0.0	0	0.01
	5/14/98	0	0.0	0	0.02
	6/8/98	0	0.0	0	0.01
LF5-GP2	4/1/98	0	0.0	0	0.00
	5/14/98	0	0.0	0	0.04
	6/8/98	0	0.0	0	0.05
LF5-GP3	4/1/98	0	0.0	<0.1	0.00
	5/14/98	0	0.0	<0.05	0.00
	6/8/98	0	0.0	0	0.00
LF5-GP4	4/1/98	40	1.0	1.5	
	5/14/98	51	0.0	2.6	0.00
	6/8/98	67	0.0	0.8	0.05
LF5-GP5	4/1/98	0	0.0		0.01
	5/14/98	Ö	0.0	0.1	0.01
	6/8/98	0	0.0	0.2	0.02
LF5-GP6	4/1/98	0	0.0	<0.05	0.01
213 010	5/14/98	0	0.0	<0.1	0.05
	6/8/98	0	0.0	<0.05	0.13
Landfill 6	0/0/20	O	0.0	0	0.05
LF6-GP1	4/1/98	0	0.0	-0.1	
210 011	5/14/98	0	0.0	<0.1	0.00
	6/8/98	0	0.0	0.1	0.03
LF6-GP2	4/1/98		0.0	0.1	0.01
LIO-ULZ	5/14/98	0	0.0	0	0.00
		0	0.0	0	0.01
I EK CD2	6/8/98	0	0.0	0	0.00
LF6-GP3	4/1/98	0	0.0	<0.1	0.00
	5/14/98	0	0.0	0	0.02
TTIC COM	6/8/98	0	0.0	< 0.05	0.00
LF6-GP4	4/1/98	0	0.0	<0.1	0.00
	5/14/98	0	0.0	< 0.05	0.00
	6/8/98	0	0.0	< 0.05	0.00
LF6-GP5	4/1/98	0	0.0	<0.1	0.00
	5/14/98	0	0.0	< 0.05	0.01
	6/8/98	0	0.0	0	0.00
					ACE\55253\Work\Product\LF2\0623

L:\work\USACE\55253\Work\Product\LF2\062398.tbl







			H	ΓW	DRIL	LIN	G L	OG .					HOLE	NO. LF2-GP1
I. COMP.	ANY NAME		T-41-					CONTRACTO	R				SHEE	
RUS I		ment and	Infrastruc	ture		Site S	Service 4. LOC		_				10F 2	SHEETS
7.00	3.000.22	3							of	FEMW 75/	75. Fo	rt (	Carson. C	0
5. NAME	OF DRILLE	ER					6. MAN	UFACTURER		DESIGNATION	<del> </del>			
Denni	s Edelma	ann	LOVE 75		0511 70		CME		_					
7. SIZE	S AND TYP LING AND S PMENT	AMPLING	CME 75 v		tinuous Co	ore		E LOCATION		0.884390	East	na	:3211437 4	401700, NAD
Edon	FMCIVI		Sampler			71		FACE ELEV			,	9	.0211107.	TOTAL OUT, TIME
								.026108	fe	et				
								ARTED 2/19/98	17,	ME: 0830			ETED	ME: #30
12 OVE	RBURDEN T	HICKNESS						_, ,	L.		1			ME: 1130
II fee		11101111200						NA feet		DAT		116. 6	TIME:	
1,000		INTO ROCK					16. DEP	TH TO WAT	ER	AND TIME HE	ASURED			
8 fee								NA feet	_	DAT			TIME:	
14. TOT 19.0 f	AL DEPTH	OF HOLE					None		LΕV	EL MEASURE	MENTS (	SPE	CIFY)	
11000		SEOTECHNIC	AL TESTING	DIS	STURBED	UNDIS			NU	MBER OF COR	F BOXES			
					NA		NA	N	ΙΑ					
20. SAN	PLES FOR	CHEMICAL	VOC		METAL	5	OTHE:R	(SPECIFY)	0.	THER (SPECI	FY) OTI	IER	(SPECIFY)	21. TOTAL CORE REC.
			NA		NA		1	NA		NA			NA	CI CON COST.
22 FITE	NA POSITION (	DE MOLE							22					NA
22. 1113	FUSITION (	OF HOLE	BACKFILLE		MONITORING	MELL	UTHERS	(SPECIFY)	23.	INSPECTOR				
			l NA		YES		1	NA	J.	E. Gillespie	9			
							ELD	GEOTECH	1	ANALYTICAL	BLOW	T		
DEPTH	US <b>CS</b>	DES	CRIPTION OF N	MATEH.	IALS		ENING TS (ppm)	SAMPLE 0 CORE BOX I		SAMPLE NO.	COUNTS  RECOVE		REI	MARKS
a	CL V		C				<u>d</u>	ее	_	1	g			<u>h</u>
		CLAY WITH	H GRAVEL (CL)										Depth is in	
. =		Stiff, Dry,	Olive (2.5Y 4/3 ne rounded gra	3), Most	tly clay, little								HS = Sampl Screening (	le Headspace
1=		to some in	ALLUVIAL/F		TERIAL							- 4	NA = Not A	
- 4												- 1		ppilodbic
2 =	///						No Idings				ĺ	- (		
- =						0	VM					1		
3	1//					Mul	tigas							
3-												- [		
=						Į					Į	Ì		
3	///										l			
4-	CL //	CLAY (CL	)									$\dashv$		
=	///	Stiff to Me	edium, Moist, Oliv	ve (2.5	Y 4/3),							-		
_ =		Mostly cla	y (Fat Clay), lii slightly plastic	ttle ver	ry fine							-		
5-		Squay suc,	singintly pidstic	at ort.						1		-		
=	//													
6-3	///	1								ļ				
6 7 7 11 11		1					No dia aa							
- 3	1//	1					adings IVM			1				
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1 7	//	Į									İ			
8-3	1//	ł												
3		1									[			
	1/1	1												
9킠												$\dashv$		
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						ĺ								
	ML/		JECT:		5253.000.2				_			1		

		HTW DRIL	LING L	OG			H	LF2-GP1
	Environ		2. INSPECTOR J.E. Gillespie					EET 2 F 2 SHEETS
ЕРТН		DESCRIPTION OF MATERIALS	FIELD SCREENING RESULTS (ppm) d	GEOTECH	ANALYTICAL SAMPLE NO.	BLOW COUNTS- RECOVERY 9		REMARKS h
		SILT [ML) Medium, Moist, Olive (2.5Y 4/3), Mostiy silt, Attie very fine sand, Blocky texture, contaminated, Weathered Pierre Shale; Note: Massive Texture @ 14ft.	No Readings OVM 580 B Multigas					contact ed Pierre
11 12 13 14 15 16 17 18 19 20	ML	SAME AS 9-14 FT.  Weathered Pierre, 45 degree interstectin fractures, little visible water/moist water table fluctuates in this area.						
	,	BOTTOM OF EXPLORATION @ 19FT. Install 1" SCHO 40 slotted screen 10 ft, 8.5 - 18.5.						
باساسا								
4 4								
55								
93 111111111111111111111111111111111111								
?7 Implim								

				H.	ΓW	DRIL	LIN	IG L	OG					HOL	ENO. LF2-0	SP2
I. COMP					,				CONTRACTO	)R					ET I	
		/ironi	ment and	Infrastruc	ture		Site 9	Service						OF	2 SHEET	S
3. PRO. 5525		0 22	3					100	ATION	rt	Carson, C	0				
5. NAM	CATE CO.										DESIGNATION		neti i			
Denn								CME								
7. SIZE	S AND	TYPE	S OF AMPLING	CME 75 v	w/ 3.	25" HSA			E LOCATIO							_
EQUI	PMENT	T	AIN CINO	Continuo	us S	ampler						Eas	ting:	3211083.9	904840, N	AD83
								100	FACE ELEV							
									1.661806	16	961	- 144	00110			
									2/18/98	ĪŦ	IME: 1530			PLETED 2/18/98	TIME: 1730	
12. OVE	RBURC	DEN TI	HICKNESS							.1					ROUND SURF	A CÉT
14 fe									tNE feet				18/98		E: 1630	CEL
3. DEP	TH DR	ILLED	INTO ROCK					16. DEI	TH TO WAT	ER	AND TIME ME					-
Not e									tNA feet		DAT			TIM	E:	
		PTH 0	F HOLE							LE	VEL MEASURE	MENT	S (SP	ECIFY)		
14 fe		500.0						None						<u></u>		
B. SAM	PLES I	FOR G	EOTECHNIC	AL TESTING	DI	STURBED	UNDIS	TUREED	1		MBER OF COR	RE BO	XES			
20. 544	4PI FS	FOR 1	CHEMICAL	Voc		NA		NA		IA	TUED /	=1,1				
AN/	ÜYSIS	S	CHEMICAL	VUC.		METAL	.5	OTHER	(SPECIFY)	0	THER (SPECI	FY)	OTHE	R (SPECIFY	21. TOTAL CORE REC.	
	NA			NA		NA			NA		NA			NA	NA NA	- 1
22. DIS	-	ION O	F HOLE	BACKFILLE	- N	MONITORIN	SWELL	OTHERS	(SPECIEV)	23	. INSPECTOR				NA	-
		_								٦	. 1 COTON					
				NA		YES			NA	J.	E. Gillespie	Р				- 1
							FI	IELD	GEOTEC	_	ANALYTICAL		OW	T		
DEPTH	USC	cs	DES	CRIPTION OF I	MATER	IALS		ENING	SAMPLE O		SAMPLE NO.	l cou	NTS-	F	EMARKS	
a	b			сс			I NE SOL	<u>d</u>	e	NU.	1 ,		OVERY a		h	
=	CL		CLAY (CL	1			[							Depth is i		
1 2 2 milimitus		//		Olive Brown (2)	5Y 4/	3). Mostly					į			1 '	iple Headspa	co E
13			clay with I	little fine gravel	very	fine sand.	1							Screening	Results	E
, 3		//			. ,		1				1			NA = Not	Applicable	E
크							l .	A.1	}							Lineals:
2 3								No adings			]					100
- =	ML		CDT (NI)				1 0	างหา			1			1		E
= =			SILT (ML)	L 1ed. Dense, Dry	/ – Mai	ist Aliva	Mul	tigas			ł			ļ		E
3 -			Brown (2.	5Y 4/3), Mostly	silt. lit	tle very fine								/		E
3 =			sand, trac	e fine gravel wi	th whit	te precip.			}							
- 3		1111	throughou	t core.								ļ		ł		E
_, ∄		Ш														E
4 🗐	ML	$\Pi\Pi$	SILT (ML)													E
크		լնկե	Same as a	above, massive,	no stri	ucture.										E
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5 =									1							Ė
Ξ									I					1		Ē
크	l f													1		E
6 7 m								No								111
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7							Mul	tigas	1					[		E
3	- 1															
3												1		-		Ë
8			Material	d alastic com										}		E
J =	J		Note: Mois	it, plastic at 8ft	, No vi	isible water,										E
=			i at clay.													Ē
9 =		Ш					1		1		1					F
9 1												-		<del> </del>		—Ę
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E																Ė
	ML		DDO	UECT:		E052.000			I .	_		ļ		L		<u>_</u>
DE E	ML/	_	PRO	JECT:	5	5253.000.2	223							HOLE NO .:	LF2-G	P2

		(g) 8000 (1900) (p) 144 (s)					HOLE NO.	ī
		HTW DI	RILLING L	OG			LF2-GP2	
I. COMP	ANY NAME Environ	ment and Infrastructure	2. INSPECTOR J.E. Gillespie				SHEET 2 OF 2 SHEETS	1
DEPTH	USCS	DESCRIPTION OF MATERIALS	FIELD SCREENING RESULTS (ppm)	GEOTECH SAMPLE OR CORE BOX NO.	ANALYTICAL SAMPLE NO.	RECOVERY	REMARKS	
a	ML	SILT WITH SAND & GRAVEL (ML7GM)	<u> </u>	ее	1	g	<u>h</u>	10
		Loose, Moist, Olive Brown, Mostly slit, yery fine to coarse sand, trace fine —ALLU	some gravel IVIAL-					10
11 12 111			No Readings OVM Multigas					Ē
=	ML	SILT [ML). Dense, Dry, Olive (5Y 3/4), Mostly sil massive little very fine sand.	t,					13 14 15 16 17 18 19 20
14 =		BUTTUM OF EXPLORATION @ 14 ft. Set i" 5.0' screen.						E-14
15 -								15 15
16								16
17 -							,	17
18 7								-18
18 19 19 20 1			:					-19
21							,	-21
22 -								-22
23								23
24 -								24 25
25 -								
26								-26
27								26 27
		PROJECT: 5525	3.000.223			1	101 E NO : 150 000	= 28
n NAELForm	DO ALETCO	1 1103201. 0020	3.300.223				HOLE NO.: LF2-GP2	

				HTV	V DRIL	LIN	G L	OG					HOLE	NO. LF2-GP3
I. COMP.				15 0-233.55.75	- A	2. DRILL	ING SUB	CONTRACTO	R				SHEE	Τ1
RUST	Env	iron	ment and	Infrastructu	re	Site S	ervice	<u> </u>					OF	2 SHEETS
3. PROJ							4. L.OC		_ [		L Co		20	
55253										FCMW77, F		ion, L	,0	
5. NAME Denni							CME		13 1	DESIGNATION	OF UNICE			
				CME 75 w/	3.25" ID HS	iΑ .		LOCATION	1					
DRIL	LING A PMENT	AND S	ES OF AMPLING	Continuos S			North	ning:1330	72	27.591290,	Easting	:32106	646.5	598100, NAD
								FACE ELEV						
						-		485104	fe	<u>et</u>				
								ARTED	Τ.,	IME: 1100	II. COMF		_	IME: 1300
10 045	DOLLOS	DEN T	HICKNESS	1	<del></del>			2/18/98			DATE: 2	<del></del>		OUND SURFACE)
12 fee		JEN I	LICKNESS.					NA feet		DA		LD (DCL	TIME	
		ILLEC	INTO ROCK						ER	AND TIME ME			1	
12 fee								Null feet		DA			TIME	:
14. TOT	AL DE	PTH (	OF HOLE						LE	VEL MEASURE	MENTS (SF	ECIFY	)	
24.0					-		None		_					
18. SAM	PLES	FOR 6	SEOTECHNICA	AL TESTING	DISTURBED NA	UNDIS	TURBED NA	1	NL IA	UNBER OF CO	RE BOXES			
20. SAN	PLES	FOR	CHEMICAL	voc	METAL	.S	OTHER	(SPECIFY)	0	THER (SPECI	FY) OTHE	R (SPE	CIFY)	21. TOTAL
ANA		_		NA NA	NA		1	۸A		NA		NA		CORE REC.
	NA								_			AFI		NA
22. DIS	POSIT	ION	OF HOLE	BACKFILLED	MONITORIN	G WELL	OTHERS	(SPECIFY)	23	. INSPECTOR			-	
				NA	YES	;	1	NA .	,	C. C	_			
						T			_	E. Gillespi		_		
OEPTH	USC	cs	DESC	CRIPTION OF MAT	ERIALS	SCRE	ELD ENIN3	GEOTECH SAMPLE O	ıR	SAMPLE NO.			RE	MARKS
a	b	. 1		c		RESUL	TS (ppm) d	CORE BOX	NO.	1	RECOVERY			h
, :	Ť		GRASS TO			1				<del>  '</del>	-	Dool		
3	CL	//				1					1	1		Feet. de Headspace
. =			CLAY (CL)	olive Brown (2.5Y	4/3) Mostly									Results
1=		//		e fine sand, little a								NA =	Not A	Applicable
]	1	//	gravel.	,										
, =		//			-SOIL-		No					1		
43	ML		7				idings tigas							
1 2 3		Ш	SILT (ML)				3	1						
٦				ed. Dense, Dry, O		1								
3 =		Ш		ly silt, some very f ar gravel; Note: Blo								1		
=		1111	Weathered		icky at 5-41t.			İ				ł		
1		Ш						1			1	1		
4	ML											T		
=			Same As A	bove.		1		1		1				
5-3				<del></del>						1				
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2 =		1111												
7		$\  \  \ $					No							
3	[	1111					adings							
, 5							ltigas					1		
'=			O71 T 11/05			1								
=				RAVEL (ML/GM) Toose, Dry, Olive B	10 EV									
。		[]]		ly silt, some angula		1								
8-						1		1						
] =	1			Neathered Pierre, 1										
1 3 3			very fine	sand, Dry, Hard dr	lling.									
9-											-			
] 3														
-	ML/		DDO	JECT:	55253.000.	003					1	HOLE	110	1F2-GP3

		HTW DRIL	INGL	O.G.			HOLE NO.	1
1. COMP	ANY NAME		2. INSPECTOR				LF2-GP3 SHEET 2	1
		ment and Infrastructure	J.E. Gillespie	GEOTECH	ANALYTICAL	BLOW	OF 2 SHEETS	-
DEPTH	USCS	DESCRIPTION OF MATERIALS	SCREENING RESULTS (ppm)		SAMPLE NO.	COUNTS- RECOVERY	REMARKS	
11 -11	ML	SILT (ML) Dense, Dry, Olive Brown (2.5Y 4/3), Mostly silt, trace to little very fine sand, blocky breaking.	d	е	1	g	h	10
12 13 13 mpm		Note: Becoming hard, compacted, olive (5Y4/4), Orange stained fracture @ 13ft, thin, less than i* horizontal, laminated.	No Readings Multigas				12 1t contact Weathered Plerre	12
11 12 13 14 15 16 17 18 19 20 20 20 20 20 20 20 20 20 20 20 20 20		Blocky pattern w/ 45 degree Intersection fractures.						14
16		Horizontal laminate, orange stain fractures.	No Readings Multigas					16
18 11111		Dark Olive (5Y3/4); Intersecting 45 degree fractures w/white precipitate along fracture.						18
		Grinding @ 19ft. Blue gray, hard w/orange staining horizontal laminate.					i	19
21		Orange Stained fracture horizontal.	No Readings Multigas					E-21
23 -		Same material as 14 -19 ft.						-22
24		Orange stained horizontal fracture.						-23
25		80 11 0M OF EXPLORATION 8 24ft. Set 1" .020 slot screen, 13.5 - 23.5 ft.						25
26 -								26
11111			<u> </u>					
NRF Form	∂DA-FTCc	PROJECT: 55253.000.2	223		1	F	HOLE NO .: LF2-GP3	£28

COMPANY NAME  RUST Environment and Infrastructure  Site Services, Inc.  A LOCATION  Landfill 2 Northern Boundary, Fort Carson, CO  Landfill 2 Northern Boundary, Fort						НТ	W	DRIL	LIN	G L	OG					HO	LE	NO. LF2-GP4
ALCATION   SECRET   ALCATION   SECRET   SESSIONATION OF DRILL   Complete									2. DRIL	ING SUB	CONTRACTO	)R						T I
Landfill 2 Northern Boundary, Fort Carson, CO	RUST	Env	vir o	nm	ent and	Infrastruc	ture		Site S	Service	s, Inc.					0	F	2 SHEETS
MANUFORTURES   DESCRIPTION OF MATERIAL																		
DEPTH PATE DEFT OF HOLE  1. ONE TO SAMPLING  CONTINUOUS CORE Barrel  CONTINUOUS CORE Barrel  CONTINUOUS CORE Barrel  Northing:1331258.86430, Easting:3209045.008080, NAD  SEL2.356482 feet  DATE: 2/19/98 TIME: 100 DATE: 2/19/88 TIME: 100 DATE: 2/19																t Carso	n,	CO
STREES AND TYPES OF ENDINGED COME TO A J. 25" ID HSA. S. HOLE LOCATION CONTINUOUS CORE Barrel STREET CONTINUOUS CORE Barrel Sampler Set 2,358 482 feet J. 5,354 82 feet J. 5,354												RS	DESIGNAT	ION (	OF DRILL			
Sampler   9. SURFACE ELEVATION   5E12.35B8 (2/ feet   10. STARTED   11. COMPLETED   12. OUT   13. OUT						TOME 75	/ 2 2	VEN TO LIC	A									
Sampler   Set 2,358 Ag / feet	ORILLI	ANL NG	AND	SAN	OF PLING								0 65/20	. =	acting: 2	20004	- 0	ODODO NAD
SEIZ.358462 feet    O.STARTED   II. COMPLETED   II. COMPLETED   II. COMPLETED   OATE: 2/19/98   TIME: 1300   STARTED   OATE: 2/19/98   TIME: 1300   OATE: 3/19/98   TIME: 3/19/98   TIME: 1300   OATE: 3/19/98   TIME: 1300   OATE: 3/19/98   TIME: 1300   OATE: 3/19/98   TIME: 1300   OATE: 3/19/98   TIME: 3/19/98   TI	EGUIP	MENT	T				is Co	re Barrei						), <u></u>	asting.s	20904	0.0	UBUBU, NAU
O. STARTED O. DETECTION BY THE 100 DATE: 2/19/98   TIME: 1300 OATE: 2/19/98						Sampler												
DATE: 2/19/98 TIME: 1300 DATE: 2/19/98 TIME: 1300 DATE: 2/19/98 TIME: 1300 DATE: 2/19/98 TIME: 1300 DATE: 2/19/98 TIME: 1300 DATE: 2/19/98 TIME: 1300 DATE: 2/19/98 TIME: 1300 DATE: 2/19/98 TIME: 1300 DATE: 2/19/98 TIME: 1300 DATE: 2/19/98 TIME: 1300 DATE: 2/19/98 TIME: 1300 DATE: 2/19/98 TIME: 1300 DATE: 2/19/98 TIME: 100 DATE: 2/19/98 TIME: 1300 DATE: 2/19/98 TIME: 2/19/98 TIME: 1300 DATE: 2/19/98 TIME: 1300 DATE: 2/19/98 TIME: 2/19/98 TIME: 1300 DATE: 2/19/98 TIME: 1300 DATE: 2/19/98 TIME:												10			III COM	LETED		
S. Depth driving from thickness   S. Depth driving from the part of the part						-						T	TME: 1100				17	WE 1300
DEPTHENA FOR LIEUE DATE: TIME:  DEPTHENA TO MATER AND TIME MEASURED  DEPTHENA TO MATER AND TIME MEASURED  DEPTHENA TERE I DATE: TIME:  1. OPTHENA TERE I DATE: TIME: TIME: TIME:  1. OPTHENA TERE I DATE: TIME: TIME: TIME:  1. OPTHENA TERE I DATE: TIME:	2 OVER	BLIBL	DEN	THI	CKNESS					$\rightarrow$				T CM			-	
30. SEPTH TO MATER AND TIME MEASURED  S. STEPL  1. TOTAL DEPTH OF HOLE  1. TOTAL NUMBER OF CORE BOXES  1. NA  1. SILT [M]]  1. DESCRIPTION OF MATERIALS  1. SILT [M]]  1. Dense - Med. Dense, Dry, Olive (2.5Y4/3), Mostly sit, blooky fracture pattern laminated, semi-consolidated hard.  1. SILT [M]]  1. Dense, Dry, Olive (2.5Y4/3), Mostly sit, blooky fracture pattern laminated, semi-consolidated hard.  1. WEATHERED PIERRE  1. DEPTH NO MATER AND TIME MEASURED ID INTERS (SPECIFY)  1. TOTAL DATE AND TIME (SPECIFY)  1. TOTAL NUMBER OF CORE BOXES  1. NA  1. NA  1. NA  1. NA  1. NA  1. SILT [M]]  1. DESCRIPTION OF MATERIALS  1. SILT [M]]  1. SILT [M]]  1. DESCRIPTION OF MATERIALS  2. SAMPLE SO THE SECIFY)  3. DEPTH TO MATERIALS  4. DEPTH TO MATERIALS  4. DEPTH TO			מבות	1711	CNACOO							746						
A TOTAL DEPTH OF HOLE  4. OTHER MATER LEVEL MEASUREMENTS (SPECIFY)  NOR  1. STAMPLES FOR GEOTECHNICAL TESTING DISTURBED NA NA NA NA NA NA NA NA NA NA NA NA NA			271 / F	=n t	NTO BOCK												MC	
A TOTAL DEPTH OF HOLE  4.0 feet    None			,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		110 110011							CIV				T	NE.	
24.0 Feet  S. SAMPLES FOR GEOTECHNICAL TESTING  DISTURBED  NA  NA  NA  NA  NA  NA  NA  NA  NA  N			PTH	OF	HOLE							LF					r-HE-	
3. SAMPLES FOR GEOTECHNICAL TESTING NA NA NA NA NA NA NA NA NA NA NA NA NA															-110 (31	-C1 ()		
NA NA NA NA NA NA NA NA NA NA NA NA NA N				GE	TECHNIC	AL TESTING T	DIS	TURBED	UNDIS			Nt	UMBER OF (	CORF	BOXES		_	
0. SAMPLESS OR CHEMICAL NA NA NA NA NA NA NA NA NA NA NA NA NA	.0.0113				3000 (10 T) 300			1			1				20020			
NA NA NA NA NA NA NA NA NA NA NA NA NA N	O. SAMP	LES	FO	R CH	EMICAL	VOC	$\Box$		 S					CIF	() OTHE	R (SPECIA	Y	21. TOTAL
2. DISPOSITION OF HOLE    BACKFILLED   MONITORING MELL   OTHERS (SPECIFY)   23. INSPECTOR   NA   YES   NA   J.E. Gillespie	ANAL	Y519	5									Ť			3 771121			CORE REC.
2. DISPOSITION OF HOLE    BACKFILLED   MONITORING MELL   OTHERS (SPECIFY)   23. INSPECTOR		NA				NA		NA		!	NA		NA			NA		NA
PPTH USCS DESCRIPTION OF MATERIALS SCREENINS RESULTS (poin) CORE BOX NO. SAMPLE NO. 1 PRECOVERY PLANT (POINT OF MATERIALS CORE BOX NO. 1 PRECOVERY PLANT (POINT OF MATERIALS CORE BOX NO. 2 PRECOVERY PLANT (POINT OF MATERIALS CORE BOX NO. 2 PRECOVERY PLANT (POINT OF MATERIALS CORE BOX NO. 2 PRECOVERY PLANT (POINT OF MATERIALS CORE BOX NO. 2 PRECOVERY PLANT (POINT OF MATERIALS CORE BOX NO. 2 PRECOVERY PLANT (POINT OF MATERIALS CORE BOX NO. 2 PRECOVERY PLANT (POINT OF MATERIALS CORE BOX NO. 2 PRECOVERY PLANT (POINT OF MATERIALS CORE BOX NO. 2 PREMATING COUNTS PRECOVERY PLANT (POINT OF MATERIALS CORE BOX NO. 2 PREMATING COUNTS PRECOVERY PLANT (POINT OF MATERIALS CORE BOX NO. 2 PREMATING COUNTS PRECOVERY PLANT (POINT OF MATERIALS CORE BOX NO. 2 PREMATING COUNTS PRECOVERY PLANT (POINT OF MATERIALS CORE BOX NO. 2 PREMATING COUNTS PRECOVERY PLANT (POINT OF MATERIALS CORE BOX NO. 2 PREMATING COUNTS PRECOVERY PLANT (POINT OF MATERIALS CORE BOX NO. 2 PREMATING COUNTS PRECOVERY PLANT (POINT OF MATERIALS CORE BOX NO. 2 PREMATING COUNTS PRECOVERY PLANT (POINT OF MATERIALS CORE BOX NO. 2 PREMATING COUNTS PRECOVERY PLANT (POINT OF MATERIALS CORE BOX NO. 2 PREMATING COUNTS PRECOVERY PLANT (POINT OF MATERIALS CORE BOX NO. 2 PREMATING COUNTS PRECOVERY PLANT (POINT OF MATERIALS CORE BOX NO. 2 PREMATING COUNTS PRECOVERY PLANT (POINT OF MATERIALS PLANT (POINT OF MATE			TION	OF	HOLE	BACKFILLE	0	MONITORING	WELL	OTHERS	(SPECIFY)	23	INSPECT	OR OR	- 1			TVM
DESCRIPTION OF MATERIALS  SCREENINS SAMPLE ON RESULTS (pipm) CORE BOX NO.  SILT (ML) Dense – Med. Dense, Dry, Olive (2.5Y4/3), mostly sit, some very fine sand, little granitic gravels, fine.  FILL MATERIAL  Note: Same as 0-4, except some angular gravel, loose crumbles dry.  SILT (ML) Dense, Dry, Olive (2.5Y4/3), Mostly sit, blocky fracture pattern laminated, semi-consolidated hard.  -WEATHERED PIERRE- 9					1		-			<del></del>		١Ť		٠.,				
BESTRIPTION OF MATERIALS  BOSCRIPTION OF MATERIALS  C  SCREENING S						NA		YES			AV	J	F. Gilles	nie				
DESCRIPTION OF MATERIALS  B ML  SILT (ML)  Dense – Med. Dense, Dry, Olive (2.5Y4/3), mostly silt, some very fine sand, little  The multiple of the sand of the san				T					F	IELD	GEOTECH	<u>.                                      </u>	ANALYTIC	AL	BLOW			
SILT_(ML)   Dense - Med. Dense, Dry, Olive (2.5Y4/3), mostly silt, some very fine sand, little grantic gravels, fine.   SILT_(ML)   Dense - Med. Dense, Dry, Olive (2.5Y4/3), mostly silt, some very fine sand, little grantic gravels, fine.   SILT_(ML)   SILT_(ML)   SILT_(ML)   SILT_(ML)   SILT_(ML)   Dense, Dry, Olive (2.5Y4/3), Mostly silt, blocky fracture pattern laminated, semi-consolidated hard.   At 5.5 ft., Weathered Pierre Shale   ML   Dense, Dry, Olive (2.5Y4/3), Mostly silt, blocky fracture pattern laminated, semi-consolidated hard.   At 5.5 ft., Weathered Pierre Shale   ML   Dense, Dry, Olive (2.5Y4/3), Mostly silt, blocky fracture pattern laminated, semi-consolidated hard.   At 5.5 ft., Weathered Pierre Shale   ML   Dense, Dry, Olive (2.5Y4/3), Mostly silt, blocky fracture pattern laminated, semi-consolidated hard.   At 5.5 ft., Weathered Pierre Shale   ML   Dense, Dry, Olive (2.5Y4/3), Mostly silt, blocky fracture pattern laminated, semi-consolidated hard.   At 5.5 ft., Weathered Pierre Shale   ML   Dense, Dry, Olive (2.5Y4/3), Mostly silt, blocky fracture pattern laminated, semi-consolidated hard.   At 5.5 ft., Weathered Pierre Shale   ML   Dense, Dry, Olive (2.5Y4/3), Mostly silt, blocky fracture pattern laminated, semi-consolidated hard.   At 5.5 ft., Weathered Pierre Shale   ML   Dense, Dry, Olive (2.5Y4/3), Mostly silt, blocky fracture pattern laminated, semi-consolidated hard.   At 5.5 ft., Weathered Pierre Shale   ML   Dense, Dry, Olive (2.5Y4/3), Mostly silt, blocky fracture pattern laminated, semi-consolidated hard.   At 5.5 ft., Weathered Pierre Shale   ML   Dense, Dry, Olive (2.5Y4/3), Mostly silt, blocky fracture pattern laminated, semi-consolidated hard.   At 5.5 ft., Weathered Pierre Shale   ML   Dense Pierre Shale	EPTH	USC	CS		DES	CRIPTION OF M	ATERI	ALS	SCRE	ENINS	SAMPLE 0	R	SAMPLE N	10.	COUNTS-		RE	MARKS
Depth is in Feet. HS = Sample Headspace Screening Results NA = Not Applicable  -FILL MATERIAL  Note: Same as 0-4, except some angular gravel, loose crumbles dry.  SILT (ML) Dense, Dry, Dive (2.5Y4/3), mostly silt, blocky fracture pattern laminated, semi-consolidated hard.	a	b	)			c			UC 20L		4	NU.	1			ĺ		h
Till MATERIAL  Note: Same as 0-4, except some angular gravel, loose crumbles dry.  SILT_(ML) Dense, Dry, Dive (2.5Y4/3), Mostly sit, blocky fracture pattern laminated, semi-consolidated hard.  -MEATHERED PIERRE-	E M	1L			CHT /M									$\neg$		Denth :-	in	
TILL MATERIAL  Note: Same as 0-4, except some angular gravel, loose crumbles dry.  SILT_(ML) Dense, Dry, Dive (2.5Y4/3), Mostly sitt, blocky fracture pattern laminated, semi-consolidated hard.  -MEATHERED PIERRE-	=						Oliva	(2.574/2)								1 '		
TILL MATERIAL—  Note: Same as 0-4, except some angular gravel, loose crumbles dry.  SILT (ML) Dense, Dry, Dive (2.5Y4/3), Mostly sit, blocky fracture pattern laminated, semi-consolidated hard.  -WEATHERED PIERRE—	. #			11	mostly silt	some very fine	sand I	(2.014/3), little										
Till MATERIAL  Note: Same as 0-4, except some angular gravel, loose crumbles dry.  SILT_(ML) Dense, Dry, Dive (2.5Y4/3), Mostly sit, blocky fracture pattern laminated, semi-consolidated hard.  -MEATHERED PIERRE-	<b>'</b> ∃						- cria, i						1				-	
The semi-consolidated hard.  -FILL MATERIAL— Note: Same as 0-4, except some angular gravel, loose crumbles dry.  SILT (ML) Dense, Dry, Olive (2.5Y4/3), Mostly silt, blocky fracture pattern laminated, semi-consolidated hard.  -WEATHERED PIERRE— 9  -WEATHERED PIERRE— 9	3				_ 5											1		PPIIOGOIC
The state of the s	_ =			1														
-FILL MATERIAL- Note: Same as 0-4, except some angular gravel, loose crumbles dry.  SILT (ML) Dense, Dry, Dive (2.5Y4/3), Mostly silt, blocky fracture pattern laminated, semi-consolidated hard.  -WEATHERED PIERRE- 9	2 = ]		11	[]							]					1		
-FILL MATERIAL- Note: Same as 0-4, except some angular gravel, loose crumbles dry.  SILT (ML) Dense, Dry, Dlive (2.5Y4/3), Mostly silt, blocky fracture pattern laminated, semi-consolidated hard.  -WEATHERED PIERRE- 9	3		11													l		
-FILL MATERIAL- Note: Same as 0-4, except some angular gravel, loose crumbles dry.  SILT (ML) Dense, Dry, Olive (2.5Y4/3), Mostly silt, blocky fracture pattern laminated, semi-consolidated hard.  -WEATHERED PIERRE-	∄			11									1				,	
-FILL MATERIAL-  Note: Same as 0-4, except some angular gravel, loose crumbles dry.  SILT (ML) Dense, Dry, Dive (2.5Y4/3), Mostly silt, blocky fracture pattern laminated, semi-consolidated hard.  -WEATHERED PIERRE- 9	3 - 크															i		
Note: Same as 0-4, except some angular gravel, loose crumbles dry.  SILT (ML) Dense, Dry, Olive (2.5Y4/3), Mostly silt, blocky fracture pattern laminated, semi-consolidated hard.  -WEATHERED PIERRE-9	=			П									1			1		
Note: Same as 0-4, except some angular gravel, loose crumbles dry.  SILT (ML) Dense, Dry, Olive (2.5Y4/3), Mostly silt, blocky fracture pattern laminated, semi-consolidated hard.  -WEATHERED PIERRE-9	Ħ												1	1				
Note: Same as 0-4, except some angular gravel, loose crumbles dry.  SILT (ML) Dense, Dry, Olive (2.5Y4/3), Mostly silt, blocky fracture pattern laminated, semi-consolidated hard.	4=	-	11	Н			-FILL	MATERIAL-										
Gravel, loose crumbles dry.  SILT (ML) Dense, Dry, Olive (2.5Y4/3), Mostly silt, blocky fracture pattern laminated, semi-consolidated hard.  -WEATHERED PIERRE-	` <b>∃</b> ^	1L		H														
Gravel, loose crumbles dry.  SILT (ML) Dense, Dry, Olive (2.5Y4/3), Mostly silt, blocky fracture pattern laminated, semi-consolidated hard.  -WEATHERED PIERRE-	7		11		Note: Same	e as 0-4, excep	t some	e angular										
SILT (ML) Dense, Dry, Olive (2.5Y4/3), Mostly silt, blocky fracture pattern laminated, semi-consolidated hard.  -WEATHERED PIERRE-	Ę 🗎		11	IJ	gravel, loos	se crumbles dry		g								1		
SILT (ML) Dense, Dry, Olive (2.5Y4/3), Mostly silt, blocky fracture pattern laminated, semi-consolidated hard.  -WEATHERED PIERRE	ᆲ			П		,			1					1				
SILT (ML) Dense, Dry, Olive (2.5Y4/3), Mostly silt, blocky fracture pattern laminated, semi-consolidated hard.  -WEATHERED PIERRE	4			11-														111
Dense, Dry, Olive (2.5Y4/3), Mostly silt, blocky fracture pattern laminated, semi-consolidated hard.  -WEATHERED PIERRE-	=		11	17	SHT /MIT													
blocky fracture pattern laminated, semi-consolidated hard.  -WEATHERED PIERRE	6		11				R) Mast	tly silt								Lieus 2	ııdf	C
Semi-consolidated hard.  -WEATHERED PIERRE	3				blocky frac	ture (2.014/3	minate/	d.			ļ							
8 -WEATHERED PIERRE	耳			11									}					
9 — WEATHERED PIERRE	7 🗗		11	Ш							Į					1		
9 — WEATHERED PIERRE	· ‡			П									1					
9 -WEATHERED PIERRE-	4			Ш														
9 -WEATHERED PIERRE	, =			Ш												1		
9	٥Ħ		11	П										1				
	∄			()		-W	EATHE	RED PIERRE	+					1				
	∄		111	1												}		
	9-1-		Ш	4														
ML PROJECT: 55253,000,223	3			1					1					T				
ML/ PROJECT: 55253.000.223	=										1							
ML/ PROJECT: 55253.000.223	=													Ì				
	/	1L/			PRO	JECT:	55	253.000.2	23			"			1	101 E NO		156 654

	100				_			
		HTW DRIL	LING L	OG			LF2-GF4	1
	Environ		2. INSPECTOR J.E. Gillespie				SHEET 2 OF 2 SHEETS	
DEPTH		DESCRIPTION OF MATERIALS	FIELD SCREENING RESULTS (ppm) d	GEOTECH SAMPLE OR	ANALYTICAL SAMPLE NO.	BLOW COUNTS- RECOVERY	REMARKS h	1,0
11 12 13 14 15 16 17 18 19 19 19 19 19 19 19 19 19 19 19 19 19		SAME AS 5.5-9 FT.  Weathered Pierre semi-consolidated blocky texture hard w/ white precipitate along breaks, (CaCO3) or gypsum crystals throughout 5.0 ft core.	No Readings OVM 580 B Multigas				·	11 12 13
15		WEATHERED PIERRE. Blocky fractures same as 9-14 w/ CaSO4/CaCO3 deposits - light honey brown liberous material almost resembles asbestos libers - mixed w/white precipitate.						14 15 16
16			No Readings OVM 580 B Multigas					-16 -17
18		Same As 14–19 ft. No indication of water –						18
		Ory.					,	20
21 -			No Readings OVM 580 B Multigas					22
23 -								23
25 -		At 24 ft. Set 10 ft slotted screen 1" SCH 40 PVC from 13.5 - 23.5 ft.						25
26 -								26
		PROJECT: Site Services, I	nc				OF NO. 150 CO.	E 28
NRF Form	PLA-FTCc	]				1 4	OLE NO.: LF2-GP4	

I. COMPANY NAI RUST Envir	ME			11 -11	با سا ۵	-117	G L	UG							LF5GP-1
					2	. ORILI	ING SUB	CONTRACTO	OR					SHEE	TI
3. PROJECT	ronm	ent and	Intrastruct	ure	];	site S	Service 4. i.oc							UF	2 SHEETS
Landfill 5, (	Gas	Probes							Cd	olorado Sp	oring	gs, Co	)		
5. NAME OF DR	ILLEF	3					6. 14AN	UFACTURE		DESIGNATION					
Dennis Edle			4.25 in ID	Hollow S	tom	Λυσο	CME-	E LOCATION	<u>, , , , , , , , , , , , , , , , , , , </u>						
7. SIZES AND T ORILLING AN EQUIPMENT	NO SA	MPLING	Continuou		tem .	Auge				67.837540	), Ea	sting	:3209	690	.368210, NA
							9. SUR	FACE ELEV	AT.					_	
								.95 feet			14				
							_	<b>ARTED</b> 8/11/07	T	IME:	_	ATE: 8	LETED /11/97	Т	IME:
12. OVERBURDE	EN TH	ICKNESS	<del></del>						1					1	OUND SURFACE)
16.0 feet								9.0 feet				/11/97		TIME:	
13. DEPTH DRIL Not encour										AND TIME ME		RED			
14. TOTAL DEP								NA.0 feet		VEL MEASURE	TE:	IS (SP		TIME:	
18.0 feet		20	2000				None			, , , , , , , , , , , , , , , , , , , ,		(0,			
IB. SAMPLES FO			AL TESTING	DISTURBE NA	D	UNDIS	TURBED NA	1	NΑ	MBER OF CO		XES		-	
20. SAMPLES F ANALYSIS	OR C	HEMICAL	VOC	М	ETALS	3	OTHER	(SPECIFY)	0	THER (SPECI	(FY)	OTHER	R (SPEC	IFY)	21. TOTAL CORE REC.
NA		1	NA		NA		1	AV		NA	ļ		NA		
22. DISPOSITIO	ON OF	HOLE	BACKFILLE	MONIT	ORING	WELL	OTHE:RS	(SPECIFY)	23	. INSPECTOR					<u>N</u> A
		ı	NA		NA			Probe	1						
			INA		INA				_	Gillespie					
DEPTH USCS	3	DESC	CRIPTION OF MA	ATERIALS		SCRE		GEOTECI SAMPLE C CORE BOX	)R		COU	LOW INTS- OVERY		RE	MARKS
3 L V	1		C		$\overline{}$		<u>d</u> 0.0	ее		1	-	g			h
3 /	1	CLAY (CL)			- 1								Depth		
13 /	1		ry stiff, dry, ver	y dark brown	(10						i		Scree	samp ning I	le Headspace Results
'3 //			ostly clay, some							1	Ì		NA = 1	Not A	pplicable
3 /		inch grave	fine gravel, highly I zones.	y piastic, i to	4										feet, hit hard ed 10 feet
23 /							=0.0						west.	141 O A C	ed to reet
3 /					- [	۲	pm								
2 2 mmhantharth	1				i									,	
3 = /															
= //	1														
43 /	1	Residual So	oils.												
	/				ĺ	•	4.0								
3 /	1	CLAY WITH													
5 = /	1		ry; Brick plugged and construction		rrei.					1					
3 /	1		ed at 4 feet and		ine.										
					1								No Re	cove	ry
6 1	1												1		
1 1							=9.4 pm								
73 /					ĺ	<b>'</b>	piii			ļ					
1	1														
1 1/	/									1					
8 -	1				ļ								ŀ		
3 /	/				1										
1	1									1					
9 = SW	(0)				-		9.0								
						HS	0.1=3								
' ما الس	• -,•					l t	ppm								

		HTW DRIL		OG			1	LF5GP-1
COMP	Environ	ment and Infrastructure	J. Gillespie					OF 2 SHEETS
ЕРТН		DESCRIPTION OF NATERIALS	FIELD SCREENING RESULTS (ppm) d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO.	BLOW COUNTS- RECOVERY		REMARKS h
	SW	SILT WITH SAND Stiff, dry, olive brown (2.5 Y 4/3), mostly silt, little sand.	9.0			Ĭ	Moist a	areas but no visible
3		SAND AND LEAN CLAY Soft; Hard refusal at 13.0 ft., increase	HS=1.0 ppm				10 001	л H2S in HSA
4 5		gravel fine to medium, little lenes of alluvial gravel with interstitial clay, moist but no visible water.	14.0				annulu	s
husfaminal		PIERRE SHALE	HS=0.0 ppm				severe Pierre feet.	ntered friable, Bly weathered Shale at 16.0 Sharp contact en alluvium and
limitimi		Dry, foliated.					i F	
mumhun								
milmitun								,
mhinitimhin								
milmin								
ntuniliuntu								
mhuntun								

	-								_	-			-	Tuo:	- NO
				HI	ΓW	DRIL	LIN	GL	OG					HOLE	LF5GP-2
I, COMP	YANY	NAME							CONTRACTO	)R				SHEE	T I
			ment and	Infrastruc	ture		Site S	ervice						OF	2 SHEETS
3. PRO.			s Probes					4.LOC		Cr	olorado Sp	orinas	CO		
		DRILLE	_								DESIGNATION				
		dlema						CME							
7. SIZE	LING	AND S	ES OF AMPLING			llow Stem	Augei		E LOCATION		080480	) Eacti	na:3	R200726	5.861100 , NA
EGUI	IPMEN	NT ·		Continuo	us Co	ore			FACE ELEV			, Lasti	ng.c	0203120	.aorioo , M
									.05 feet		2011				
									ARTEO	_		11. CO			
10 01/5	.0011	DOCAL T	LITOVALEGG						8/12/97		IME:	DATE			INE:
10.5	0.1000000		HICKNESS						NA.0 feet			NCOUNTE TE: 8/12/		TIME	OUND SURFACE
			INTO ROCK	_							AND TIME ME		-	121-12	
		ounte							NA.0 feet		DAT			TIME	:
			OF HOLE					1		LE	VEL MEASURE	MENTS (	SPEC	IFY)	
14.0			SEOTECHNIC	AL TESTING	nte	STURBED T	UNDIS	None TURBED		NI.	UMBER OF COF	RE BOVE			• • • • • • • • • • • • • • • • • • • •
. D. OAM						NA	\$11010	NA		1A		,_ 50x20	•		
20. SA	MPLE	S FOR	CHEMICAL	V0C		METAL	S	OTHER	(SPECIFY)	0	THER (SPECI	FY) OTI	HER I	(SPECIFY)	21. TOTAL
AN				NA		NA			NA		NA		٨	۱A	CORE REC.
22 DIC	NA		OF HOLE				. WE.			22				1/3	NA
22. 015	DE MOI	, i tou (	N. HOFE	BACKFILLE	:U	MONITORING	WELL	UTHERS	(SPECIFY)	23	. INSPECTOR				
				NA	ļ	NA		Gas	Probe	J	. Gillespie				
				Welling a				ELD	GEOTECH	1	ANALYTICAL				
DEPTH	US	scs	DES	CRIPTION OF N	AATER	IALS	SCRE	ENING TS (ppm)	SAMPLE O	NO.	SAMPLE NO.	COUNTS		RE	MARKŠ
a	SW	Ь		c				<u>d</u>	е		1	0	_		h
=	3 M	•					,	7.0				1		epth is in	
=			WELL GRA Reddish b	DED SAND (SW)	1							ľ		IS = Samp Screening	le Headspace
1-3	CL	17	neddisii b	ONII.		-TOPSOIL-						ĺ		_	Applicable
=	1	//													, ,
2.3	1	1/1	LEAN CLA		. ,	10 =	HS	=0.0			Į				
2   1   1   1   1   1   1   1   1   1		//		oist, dark greyis Ily clay, little sill			P	ρm							
	1	1/	1,2,, 11031	a, old, ittle si		-BACKFILL-								2	
3 🗐		//												,	
1									1						
=		11													
4 =		///	1542.00	V (Ct.)					1				ì		
4		1/1	LEAN CLA Same as a					=27.6							
5 -		1//			-	ALLUVIUM-	P	ρm							
٠ <u>∃</u>		11							1						
=	1	///							ļ						
6-	1	44				<del></del> . <del></del>									
1 3	CL	11	LEAN CLA	Y (CL)											
1		1//	Soft, mois	t, dark greyish l							1		ļ		
7-		1//	mostly cla	y, little silt and	fine sa	and.			[						
=		1//					}						ľ		
		11													
		1//		Y WITH SAND (					1						
8-1			Dense dr	v dark grevish		(10 YR 4/2),						1			
8-111-18					4 A 4										
8				y some coarse	to fine	e sand.									
6 7 8 8 9 9					to fine	e sand.		9.0							from 9.0 to
6 8 10 8					to fine	e sand.	HS	9.0 =0.0						Saturated 0.5 feet.	from 9.0 to

		HTW DRIL	LING L	OG			HOLE NO.
	Environ	ment and Infrastructure	2. INSPECTOR J. Gillespie				SHEET 2 OF 2 SHEETS
ертн а	USC <b>S</b>	DESCRIPTION OF MATERIALS	FIELD SCREENING RESULTS (ppm)	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO.	BLOW COUNTS- RECOVERY	REMARKS h
11 12 13 13 13	CL	SEVERELY WEATHERED PIERRE SHALE Grey with weathering along joints (2.5 Y 5/I), to brownish yellow (10 YR 6/8). Clay with sand as above.	9.0 HS=0.0 ppm				B.O.E at 14.0 feet. Installed bentonite pellets from 14 to 19 feet, 3 feet of screen from 5.5 to 8.5 feet.
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15							
6 7 8 8 m							
7							
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9							
o-limit Timet			:				,
11-11							
2 1							
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on fundam							
=							4
7   1111							
=		PROJECT: Landfill 5, Gas Prob	.00				OLE NO.: LF5GP-2

RESULTS (ppm) CORE BOX NO.  Topsoil.  CLAN CLAY WITH SAND (CL1 Dense, dry, light dive brown (2.5 Y 5/4), mostly clay with some fine to medium sand, little to few silt.  HS=0.0 ppm  LEAN CLAY WITH SAND (CL1 Dense, dry, light dive brown (2.5 Y 5/4), mostly clay with some fine to medium sand, little to few silt.  HS=0.0 ppm  LEAN CLAY WITH SAND (CL1 Same as above.  LEAN CLAY WITH SAND (CL1 Same as above.  HS=0.0 ppm  Severely weathered Pierre at 4 to 5 feet. Increasing alluvial content and less clay with depth.  WELL SORTED SAND WITH CLAY (SW) Loose, saturated, olive yellow (2.5 Y 6/8), mostly coarse granitic sand, some line to medium sand.  Bottom of exploration at 9 feet.				Н	ΓW	DRIL		110000000000000000000000000000000000000	Contraction of the Contraction o					HOLE	NO. LF5GP-3	
ALCOCATION AND CO DRILLER AND TYPES OF DRILLER CONTINUOUS CORE AND TYPES OF DRILLER CONTINUOUS CORE AND TYPES OF DRILLER CONTINUOUS CORE AS SUPERAGE ELEVATION STARTED OATE: 37/79.08 forcet  S. OVERBURGEN THICKNESS FOR CHEMICAL TOTAL CEPTH OF HOLE AND THE STARTED OATE: 37/79.09 forcet  S. OVERBURGEN THICKNESS FOR CHEMICAL TOTAL CEPTH OF HOLE AND THE AND THE ASSESSMEND OATE: 37/79.09 forcet  S. OVERBURGEN THICKNESS FOR CHEMICAL TOTAL CEPTH OF HOLE AND THE ANALYSING NA NA NA NA NA NA NA NA NA NA NA NA NA	I. COMP	ANY NAME		Indra-1	A					R						1
Andreid S, Gas Probes  Fort Carson, Colorado Springs, CO  NAME OF DRILLS  CONTINUOUS CORE  BUILDING AND SAMPLING  COntinuous Core  SUBJECT AND SAMPLING  CONTINUOUS CORE  BUILDING AND SAMPLING  CONTINUOUS CORE  BUILDING AND SAMPLING  CONTINUOUS CORE  BUILDING AND SAMPLING  CONTINUOUS CORE  BUILDING AND SAMPLING  CONTINUOUS CORE  BUILDING AND SAMPLING  CONTINUOUS CORE  BUILDING AND SAMPLING  CONTINUOUS CORE  BUILDING AND SAMPLING  CONTINUOUS CORE  BUILDING AND SAMPLING  CONTINUOUS CORE  BUILDING AND SAMPLING  CONTINUOUS CORE  BUILDING AND SAMPLING  CONTINUOUS CORE  BUILDING AND SAMPLING  CONTINUOUS CORE  BUILDING AND SAMPLING  CONTINUOUS CORE  BUILDING AND SAMPLING  CONTINUOUS CORE  BUILDING AND SAMPLING  CONTINUOUS CORE  BUILDING AND SAMPLING  CONTINUOUS CORE  BUILDING AND SAMPLING  CONTINUOUS CORE  BUILDING AND SAMPLING BUILDING AND SAMPLING BUILDING AND SAMPLING AND SAMPLING BUILDING			ment and	Intrastruc	ture		oite S							UF	SHEETS	
S. MANUE CO DRILLED   CONTINUOUS COTE   CONTINUOUS CONTINUOUS COTE   CONTINUOUS COTE   CONTINUOUS COTE   CONTINUOUS COTE   CONTINUOUS COTE   CONTINUOUS COTE   CONTINUOUS COTE   CONTINUOUS COTE   CONTINUOUS COTE   CONTINUOUS COTE   CONTINUOUS CO			s Probes							Со	olorado Sp	rings, C	0			1
A TOTAL DEPTH OF HOLE  D. OSAMPLES FOR GEOTECHNICAL TESTING  D. SAMPLES FOR GEOTECHNICAL TESTING TO THE SAMPLE TO THE SAMPL	5. NAME	OF DRILL	ER					B. MAN	UFACTURER							1
CONTINUOUS CORE  Northing(I338687/182480, Easting:3209898.733760, NA)8  SOURAGE ELEVATION  S.779.08 feet  I0. STARTED  II. COMPLETED  III. COM				A OF In Ti	7 110	llow Ctom	Augo									
S. SURFACE ELEVATION  S. TOP 3. SITE OF THE STATE OF THE	DRILL DRILL	LING AND S	AMPLING				Auge				67.162480.	Easting	g:3 <b>20</b> 9	898.	733760 . NA	b83
D. STARTED   ILCONFECTED	Edoi	FMCNI		Continuo	43 0	010		9. SURI	FACE ELEV	ATI						
DATE: 8/12/97 TIME:  QUERBURGEN THICKNESS STEGLET THO 9.0 1 feet 1.5 CEPT IN SECONT TERES (SECONT TE												4 55:	01.5355			
S. OVERBURGEN THICKNESS   S. SEPTI GROUNDWATER PIRST ENCONTRED (GELON GROUND SURF ACE)										TI	ME:				IME.	1
DEPTH BLIS (DISTORORS)   DEPTH BLIS (DISTORORS)   DEPTH BLIS (DISTORORS)   DEPTH BLIS (DISTORORS)   DEPTH DATER AND TITLE HEASURED   DEPTH BLIS (DISTORORS)   DEPTH DATER AND TITLE HEASURED   DEPTH BLIS (DISTORORS)   DEPTH DATER AND TITLE HEASURED   DEPTH BLIS (DISTORORS)   DEPTH BLIS (DISTORORS)   DEPTH BLIS (DISTORORS)   DISTORORS   DIST				1					-, · <del>-</del> , - ·				-,,			1
NOT ERCOUNTERED  A TOTAL DEPTH OF HOLE  1.0 TOTAL DEPTH OF HOLE  1.0 TOTAL DEPTH OF HOLE  1.0 THER MATER LEVEL MEASUREMENTS (SPECIFY)  NONE  1.0 SAMPLES FOR GEOTECHNICAL TESTING  1.0 SAMPLES FOR GEOTECHNICAL TESTING  1.0 NA  1.0 N		S. Andrews											7	TIME		1
ANALOSIS DESCRIPTION OF HOLE  S. SAMPLES FOR GEOTECHNICAL TESTING DISTURBED NA NA NA NA NA NA NA NA NA NA NA NA NA														TIME		1
SAMPLES FOR GEOTECHNICAL TESTING DISTURBED UNDISTURBED 9, TOTAL NUMBER OF CORE BOXES NA NA NA NA NA NA NA NA NA NA NA NA NA N						<del></del>							PECIFY			1
NA NA NA NA NA NA NA NA NA NA NA NA NA N								None						-		
NA  NA  NA  NA  NA  NA  NA  NA  NA  NA				AL TESTING	DI	0. 1	UNDIS	NA	N	IA						
NA NA NA NA NA NA NA NA NA NA NA NA NA N	20. SAI	MPLES FOR	CHEMICAL	VOC		METAL	S	OTHER	(SPECIFY)	0.	THER (SPECI	FY) OTH	ER (SPE	CIFY	21. TOTAL	1
2. DISPOSITION OF HOLE  NA  NA  NA  Gas Probe  Joey Gillespie  FETH USCS  DESCRIPTION OF NATERIALS  C C C C C C C C C C C C C C C C C C C				NA		NA		1	NA		NA		NA			
PPTH USCS DESCRIPTION OF NATERIALS SCREEMING RESULTS (spin) CORE BOX NO. SAMPLE ON AMALYTICAL BLOW CONTROL CON	22. DIS		OF HOLE	BACKFILLE	EO	MONITORING	3 WELL	OTHERS	(SPECIFY)	23.	. INSPECTOR	1			INA	1
PPTH USCS DESCRIPTION OF NATERIALS SCREEMING RESULTS (spin) CORE BOX NO. SAMPLE ON AMALYTICAL BLOW CONTROL CON				NIA		NIA	•	Gae	Probe							1
SCREENING SAMPLE OR SAMPLE OR SAMPLE OR SAMPLE OR SAMPLE OR SAMPLE OR SAMPLE OR SAMPLE OR SAMPLE OR SAMPLE OR SAMPLE OR SAMPLE OR SAMPLE OR SAMPLE OR SAMPLE OR SECOVERY SECOND SEC				INA		I NA		<u> </u>								1
Topsoil.  LEAN CLAY WITH SAND (CL) Dense, dry, light olive brown (2.5 Y 5/4), mostly clay with some fine to medium sand, little to few silt.  HS=0.0 ppm  4.0  LEAN CLAY WITH SAND (CL) Same as above.  LEAN CLAY WITH SAND (CL) Same as above.  HS=0.0 ppm  4.0  Severely weathered Pierre at 4 to 5 feet. Increasing alluvial content and less clay with depth.  WELL SORTED SAND WITH CLAY (SW) Loose, saturated, olive yellow (2.5 Y 6/8), mostly coarse grantic sand, some line to medium sand.  Bottom of exploration at 9 feet.  Bottom of exploration at 9 feet.	CEPTH						SCRE	EENING .TS (ppm)	SAMPLE O	R ·	SAMPLE NO.	COUNTS: RECOVER		RE		
Topsoil.  LEAN CLAY WITH SAND (CL) Dense, dry, light olive brown (2.5 y 5/4), mostly clay with some fine to medium sand, little to few silt.  HS=0.0 ppm  HS=0.0 ppm  LEAN CLAY WITH SAND (CL) Same as above.  Severely weathered Pierre at 4 to 5 feet. Increasing gravel content, allowial granite, pink gravel, surounded, interstitial clay.  HS=0.0 ppm  Severely weathered Pierre at 4 to 5 feet. Increasing allowial content and less clay with depth.  NELL SORTED SAND MITH CLAY (SW) Loose, saturated, olive yellow (2.5 y 6/8), mostly coarse granitic sand, some line to medium sand.  Bottom of exploration at 8 feet.	_			C			<del> </del>		ее		<del>                                     </del>	9	Dan't	h ie !-		Fo
LEAN CLAY WITH SAND (CL) Same as above.  Increasing gravel content, alluvial granite, pink gravel, surounded, interstitial clay.  HS=0.0 ppm  WELL SORTED SAND WITH CLAY (SW) Loose, saturated, olive yellow (2.5 Y 6/8), mostly coarse granitic sand, some fine to medium sand.  Bottom of exploration at 9 feet.	1	1//	Topsoil.				-									E
LEAN CLAY WITH SAND (CL) Same as above.  Increasing gravel content, alluvial granite, pink gravel, surounded, interstitial clay.  HS=0.0 ppm  WELL SORTED SAND WITH CLAY (SW) Loose, saturated, olive yellow (2.5 Y 6/8), mostly coarse granitic sand, some fine to medium sand.  Bottom of exploration at 9 feet.	الله ا	1//	15111511	V LITTLE COM	(n. )								Scre	ening	Results	Ē.
LEAN CLAY WITH SAND (CL) Same as above.  Increasing gravel content, alluvial granite, pink gravel, surounded, interstitial clay.  HS=0.0 ppm  WELL SORTED SAND WITH CLAY (SW) Loose, saturated, olive yellow (2.5 Y 6/8), mostly coarse granitic sand, some fine to medium sand.  Bottom of exploration at 9 feet.	' '					2.5 Y 5/4).							NA =	Not A	Applicable	E'
LEAN CLAY WITH SAND (CL) Same as above.  Increasing gravel content, alluvial granite, pink gravel, surounded, interstitial clay.  HS=0.0 ppm  WELL SORTED SAND WITH CLAY (SW) Loose, saturated, olive yellow (2.5 Y 6/8), mostly coarse granitic sand, some fine to medium sand.  Bottom of exploration at 9 feet.	1	1//	mostly cla	y with some fine	e to m	edium sand,										E
LEAN CLAY WITH SAND (CL) Same as above.  Increasing gravel content, alluvial granite, pink gravel, surounded, interstitial clay.  HS=0.0 ppm  WELL SORTED SAND WITH CLAY (SW) Loose, saturated, olive yellow (2.5 Y 6/8), mostly coarse granitic sand, some fine to medium sand.  Bottom of exploration at 9 feet.	2-	1//	little to fe	ew silt.												-2
LEAN CLAY WITH SAND (CL) Same as above.  Increasing gravel content, alluvial granite, pink gravel, surounded, interstitial clay.  HS=0.0 ppm  WELL SORTED SAND WITH CLAY (SW) Loose, saturated, olive yellow (2.5 Y 6/8), mostly coarse granitic sand, some fine to medium sand  Bottom of exploration at 9 feet.		1//	1				'									E
LEAN CLAY WITH SAND (CL) Same as above.  Increasing gravel content, alluvial granite, pink gravel, surounded, interstitial clay.  HS=0.0 ppm  WELL SORTED SAND WITH CLAY (SW) Loose, saturated, olive yellow (2.5 Y 6/8), mostly coarse granitic sand, some fine to medium sand  Bottom of exploration at 9 feet.	2	1//	1											ř		E.
8 SW WELL SORTED SAND WITH CLAY (SW) Loose, saturated, olive yellow (2.5 Y 6/8), mostly coarse granitic sand, some fine to medium sand.  Bottom of exploration at 9 feet.	3 =	1//	1								1					E-3
8 SW WELL SORTED SAND WITH CLAY (SW) Loose, saturated, olive yellow (2.5 Y 6/8), mostly coarse granitic sand, some fine to medium sand.  Bottom of exploration at 9 feet.	1	1//	1						1				l			F
8 SW WELL SORTED SAND WITH CLAY (SW) Loose, saturated, olive yellow (2.5 Y 6/8), mostly coarse granitic sand, some fine to medium sand.  Bottom of exploration at 9 feet.	4-	1//	1				<u> </u>	4.0								E
8 SW WELL SORTED SAND WITH CLAY (SW) Loose, saturated, olive yellow (2.5 Y 6/8), mostly coarse granitic sand, some fine to medium sand.  Bottom of exploration at 9 feet.		1//	1		(m. )			٧.٠	1							E
8 SW WELL SORTED SAND WITH CLAY (SW) Loose, saturated, olive yellow (2.5 Y 6/8), mostly coarse granitic sand, some fine to medium sand.  Bottom of exploration at 9 feet.	_ E	1//			(CL)											E
8 SW WELL SORTED SAND WITH CLAY (SW) Loose, saturated, olive yellow (2.5 Y 6/8), mostly coarse granitic sand, some fine to medium sand.  Bottom of exploration at 9 feet.	5-	1//	June 93 6	doute.												-5
8 SW WELL SORTED SAND WITH CLAY (SW) Loose, saturated, olive yellow (2.5 Y 6/8), mostly coarse granitic sand, some fine to medium sand.  Bottom of exploration at 9 feet.	3	1//	ł													E
8 SW WELL SORTED SAND WITH CLAY (SW) Loose, saturated, olive yellow (2.5 Y 6/8), mostly coarse granitic sand, some fine to medium sand.  Bottom of exploration at 9 feet.	6	1//	1 ,			data - 2					1		C	aroli -	ugaibarad	E,
8 SW WELL SORTED SAND WITH CLAY (SW) Loose, saturated, olive yellow (2.5 Y 6/8), mostly coarse granitic sand, some fine to medium sand.  Bottom of exploration at 9 feet.	ੱ	1//	Increasing	g gravel conter el. surnunded in	it, allu itersti	vial granite, tial clav		S=0.0								E
8 SW WELL SORTED SAND WITH CLAY (SW) Loose, saturated, olive yellow (2.5 Y 6/8), mostly coarse granitic sand, some fine to medium sand.  Bottom of exploration at 9 feet.	E	1/	) Pilit grave	, sar senece, II	, (0, 31)	an oluj.							Incr	easing	g alluvial	E
Solve yellow (2.5 Y 6/8), mostly coarse granitic sand, some fine to medium sand.  Bottom of exploration at 9 feet:	7-	1//	1				1									E 7
Solve yellow (2.5 Y 6/8), mostly coarse granitic sand, some fine to medium sand.  Bottom of exploration at 9 feet:		1//	1													Ē,
Solve yellow (2.5 Y 6/8), mostly coarse granitic sand, some fine to medium sand.  Bottom of exploration at 9 feet:		//	ļ				-									E
Solve yellow (2.5 Y 6/8), mostly coarse granitic sand, some fine to medium sand.  Bottom of exploration at 9 feet:	8-	5W	WELL SOF	RTED SAND WIT	H CLA	Y (SW)										-8
9 le d medium sand. Bottom of exploration at S	=															Ē.
	ا ا				and, so	ome fine to									exploration at	E.
													9 fe	et.		1
	1		1													-
PROJECT: Landfill 5, Gas Probes HOLE NO.: LF5GP-3		4	1								<u> </u>	<u> </u>				Ŀ

			ΗΊ	TW	DRIL	_							HOLE	LF5GP-4
	ANY NAME	mont and	Infrastruc	turo				CONTRACTO	OR				SHEE	10005
3. PRO.		ment and	THILASTIAC	ture		Site (	Service		_				TOF	2 SHEETS
		s Probes							С	olorado Sp	rinas	CO		
	OF DRILL					-				DESIGNATION				
	is Edlem						CME-	-75						
7. SIZE DRIL EQUI	S AND TYP LING AND S PHENT	ES OF AMPLING	4.25 in IC		llow Stem ore	Auge	Norti		379		, East	ing:	3208914.	147310 , NAI
								.22 feet		ION				
			<u> </u>					ARTED			111 00	MOI	ETEO	
							_	8/12/97	ТІ	ME:	_			IME:
2. OVE	RBURDEN T	HICKNESS					15. DEP	TH GROUND						OUND SURFACE)
4.0 f								:14.0 feet			TE: 8/12/		TIME:	
		INTO ROCK								AND TIME ME				
	ncounte							NA.0 feet		DAT			TIME	
1 <b>4. 10</b> 1 19.0 1	AL DEPTH	OF HOLE							LE	VEL MEASURE	MENTS	(SPE	CIFY)	
		GEOTECHNIC	AL TESTING	DI	STURBED	UNDIS	None	19. TOTAL		MBER OF COR	RE BOXE	5		
20. SAI	PLES FOR	CHEMICAL	VOC		NA METAL	S	NA OTHER	(SPECIFY)	0. 1V	THER (SPECI	FY) OT	HER	(SPECIFY)	21, TOTAL CORE REC.
	NA		NA		NA		1	٧A		NA			NA	CORE REC.
22. DIS	POSITION (	OF HOLE	BACKFILLE	0	MONITORING	WELL	OTHERS	(SPECIFY)	23.	. INSPECTOR				
	NA NA							Probe	Jo	pey Gillesp	oie			
DEPTH	RES						IELD EENING .TS (ppm)	GEOTECH SAMPLE O CORE BOX	)R I	ANALYTICAL SAMPLE NO.	BLOW COUNTS RECOVE	S-	RE	MARKS
-a	CL V		С				0.0	e	_	1	g	4		h
1 2 3		LEAN CLAY WITH GRAVEL (CL)  Dense, dry, dark olive brown (2.5 Y 3/3), mostly clay, some coarse gravel, little sand.								,			Screening	le Headspace Results
2 1					-FILL-		S=0.0					- 1	NA = Not A 100% recov cover.	ery. Landfill
1						[	mqc					1		
3 =													,	
7						ĺ						1		
7 ]	1//	FANCIA	Y WITH GRAVEL	(CL)			4.0							
11111			bove then black		d debris for									
2 6 mmmmm	1/		-									1		
킄	///												3 feet of r	ecovery
6-3												1		,
<u> </u>												h		
=							S=1.8 opm							
7 = 1	//					'	וווקל							
′ 🗒	1//													
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8 =	1//													
7 1	///													
3														
Eρ	///													
,						HS	9.0 G=0.5 opm							
	1//					1 ,	· Ի III			1	ł	ı		

		HTW DRIL	The Company of the Co	OG				HOLE NO.	
	ANY NAME Environr	1	2. INSPECTOR JOBY Gillespi	ie				SHEET 2 OF 2 SHEETS	
DEPTH a	USCS	DESCRIPTION OF MATERIALS	FIELD SCREENING RESULTS (ppm)	GEOTECH SAMPLE OR	ANALYTICAL SAMPLE NO.	BLOW COUNTS- RECOVERY		REMARKS	
		Wood/glass shards with sandy clay lenses. Clay is saturated, moist and plastic.	9.0 HS=0.5 ppm					et of recovery. feet, landfill	10
13 - 14 - 111		LEAN CLAY WITH SAND (CL)	14.0						13
11 12 13 14 15 16 17 18 19 19 19		Soft, saturated, light olive brown (2.5 Y 5/4), mostly clay, some fine to coarse sand; out of landfill debris.	HS=0.5 ppm				4 fee	et of recovery	16
18 19 19		LEAN CLAY (CL) Soft, moist, dark olive brown (2.5 Y 3/3), mostly clay; resembles modling clay.					Back pelle feet	of screen from 5.5	18
20 -									2
22 -									22
24									2
26 1									2
27									2
WDE E	PDA-FTCc	PROJECT: Landfill 5, Gas Prot	oes			ŀ	OLE	NO.: LF5GP-4	E2

			HTV	W DRIL	LIN	IG L	OG					HOLE	NO. LF5GP-5
	ANY NAME						CONTRACTO	R				SHEE	TI
		ment and	Infrastructu	re	Site S	Service						OF	2 SHEETS
3. PRO		Drobas				4. LOC		C c	olorado Sp	rings	CO		
	fill 5, Gas								DESIGNATION				
	is Edlema					CME-			DE01011A1101	. 0. 0	-		
			4.25 in ID H	Hollow Stem	Auge	r 8. HOL	E LOCATION						
EGUI	S AND TYPE LING AND S PMENT	AMPLING	Continuous	Core						Eastin	g:3208	980.	32520 , NAD
				117.70			FACE ELEV		ON				
							.55 feet			10.00			
							ARTED 8/13/97	Ттт	ME:		MPLETED : 8/13/97		IME:
2. DVF	RBURDEN T	HICKNESS											OUND SURFACE)
200		14.0 feet					:12.0 feet			TE: 8/13/		TIME	
3. DEP	TH DRILLED	INTO ROCK				16. DEF	TH TO WAT	ER	AND TIME ME				
	encounte					DEPTH	NA.0 feet		DA	TE:		TIME	
	AL DEPTH O	OF HOLE						LEV	VEL MEASURE	MENTS (	SPECIFY	)	
4.0		SECTEDIANO	AL 75077110	0.02.00000		None							
D. SAM	IFLES FUR C	DEUTEUMNIU	AL TESTING	DISTURBED NA	ONDIS	NA		. NU 1A	MBER OF CO	RE BOXES	i		
20. SAI	MPLES FOR I	CHEMICAL	VOC	METAL	S		(SPECIFY)		THER (SPECI	EY) OT	ER (SPE	CIEVI	21. TOTAL
AN	MPLES FOR							Ť		. ,,   011		CIL I)	CORE REC.
	NA		NA	NA		1	NΑ		NA		NA		NA I
2. DIS	POSITION	F HOLE	BACKFILLED	MONITORIN	G WELL	OTHERS	(SPECIFY)	23.	INSPECTOR				1 1111
			NIA			-		1					
			NA	NA		Gas	Probe	Jo	oey Gillesp	oie			
DEPTH	0.502.3					IELD EENING TS (ppm)	GEOTECH SAMPLE O CORE BOX	1 R C	ANALYTICAL SAMPLE NO.	BLOW COUNTS RECOVE		RE	MARKS
а	Ь		С			<u>a</u>	e	110.	1	S S	``		h
3	CL	Topsoil.			(	0.0					Dept	h is in	Feet.
3		i i			-						HS =	Samp	le Headspace
14	///	LEANCIA	Y WITH COAVEL TO	וי		l				1	Scre	ening	Results
=	1//	Soft, mois	Y WITH GRAVEL (C t, olive brown (2.5 fine to coarse sar	Y 4/3), mostly		ļ					1		Applicable
Ξ	1//	clay, little gravel.	fine to coarse sar	id and fine		ļ				1	Fill m	ateria	i
2-	//	9. 4701.		-FILL-		S=0.0				1			
=	1//				1 5	opm .			1				
1 2 3												,	
3-												ŕ	
=	1//												
=	//												
4-3	1//					4.0							
=	1//				'	4.0				1			
=		Decrease	d gravel content.		1						Ĺ		
5 =							İ		į	1			
=	///				}								
3	10						İ		]	1	fill m	ateria	l
6-3	1//												
=	1//				LIE	8=0.9				}			
3	1//					s=u.y nqc				1			
7-	(//	LEANICIA	Y WITH GRAVEL (	ווי					!				
=	1//	Same as a	above.	<u></u>							l.		
Ξ	1//								1				
8-3	1//				1		1			1	1		
3	1//												
=	1//								[	1			
9-													
3	1//				1	9.0				1	Ļ		
	1//					S=0.0 ppm			I				
=													

		HTW DRIL	LING L	OG				HOLE NO.	1
I. COMP.	ANY NAME		2. INSPECTOR Joey Gillespi					SHEET 2 OF 2 SHEETS	
DEPTH		DESCRIPTION OF MATERIALS	FIELD SCREENING RESULTS (ppm)	GEOTECH SAMPLE OR	ANALYTICAL SAMPLE NO.	BLOW COUNTS- RECOVERY		REMARKS	
		LEAN CLAY WITH SAND (CL) Stiff, moist, olive brown (2.5 Y 4/4), mostly clay and some fine to coarse sandFILL?-	9.0						10
11 12 13 13 14 11 14 11 14 11 14 11 14 11 14 11 14 11 14 11 11		SANDY LEAN CLAY (CL) Soft, saturated, olive brown (2.5 Y 4/4), mostly clay, some fine to coarse sand, trace fine gravel.  -ALLUVIUM-	HS=0.0 ppm				Insta from : BGS.	at 14.0 feet. lled with screen 5.5 to 12.0 feet Installed bentonite	13
=							<del>pellet</del>	s fro 14 to 12,5 ft.	14
15 7									F
16									16
17 -									-17
15 16 17 18 18 19 19 19									16 17 18 19 19
19									19
20								2	-20
21-									-21
22									22
23						Į			23
24-			·						24
25									25
26									-26
27 -									E
,									-27
MRE Enter	POA-FICC	PROJECT: Landfill 5, Gas Prob	es	1		 	HOLE N	NO.: LF5GP-5	E-28

			HTV	V DRIL	LIN	IG L	OG		- 455 FG			HOLE	NO. LF5GP-6	1
I. COMP	ANY NAME				2. DRILI	ING SUB	CONTRACTO	R				SHEE	T 1	1
and the same of th		nent and	Infrastructur	e	Site S	Se vice		_				OF 2	2 SHEETS	1
3. PROJ		D				4. LOC		C -	Jorada Ca	rings C	0			1
	fill 5, Gas								lorado Sp DESIGNATION					-
	is Edlema					OME-		13 [	DESTRUNTION	OF BRILL				
			4.25 in ID H	follow Stem	Auge		ELOCATION	1						1
DRIL	S AND TYPE LING AND SA PHENT	MPLING	Continuous			North	ning:1336	75	5.475210,	Easting	:3208	3759.0	025240 , NA	108
-							FACE ELEV	ATI	ON					1
						5800	.17 feet							
							ARTED	_		II. COM				1
							8/13/97		ME:	DATE:			ME:	-
	RBURDEN TH		+				NA.0 feet			E: 8/13/9		TIME:	OUND SURFACE)	+
	TH DRILLED							_	AND TIME ME			TIME.		1
	encounter						NA.0 feet	_	DAT			TIME:		1
	AL DEPTH O					Ii'. OTH	ER WATER	LEV	EL MEASURE	MENTS (S	PECIFY	)		1
24.0	feet					None								
IB. SAM	PLES FOR G	EOTECHNIC	AL TESTING	DISTURBED	UNDIS				MBER OF COR	RE BOXES				1
				NA		NA		ΙA						
20. SAN	MPLES FOR C	HEMICAL	VOC	METAL	S	OTHER	(SPECIFY)	0.	THER (SPECI	FY) OTHE	R (SPE	CIFY)	21. TOTAL CORE REC.	
			NA	NA		1	NA		NA		NA			1
22 DTC	NA SPOSITION D	E HOI E						22	. INSPECTOR				L_NA	1
22. 015	N OUT LION D	TIVLE	BACKFILLED	MONTTORING	WELL	UTFERS	(OLECTH A)	23	. INSPECTOR					1
			NA	NA.		Gas	Probe	1	oey Gillesp	oie.				1
					F	IELD	GEOTECH		ANALYTICAL		_			1
CEPTH	uscs	DES	CRIPTION OF MAT	ERIALS	SCR	EENI VG	SAMPLE 0	R	SAMPLE NO.	COUNTS-		RE	MARKS	1
a	ь		c		RESU	_TS (ppm) d	CORE BOX	NO.	,	RECOVER	Y		h	1
3 4 5 7 - 8	CL	Dense, dr fine grave Same as a LEAN CLA Stiff, mois	RADED GRAVEL WI'y, reddish yellow (sel with medium and comments and comments and comments are with medium and comments are also become a selection and comments	5 Y 7/8), mostly coarse gravel.  CL1 (2.5 Y 3/3),							HS = Scre	eening	le Headspace Results applicable	dearter the street and so the street of the
9 -														agest to a colored
		PRO	DJECT: Landf	ill 5, Gas Pro	bes					- 1	HOLE	NO.:	LF5GP-6	

		HTW DRIL	LING L	OG			HOLE NO.	1
	Environ	ment and Infrastructure	2. INSPECTOR Joey Gillesp	ie			SHEET 2 OF 2 SHEETS	
ОЕРТН	USCS b	DESCRIPTION OF MATERIALS	SCREENING RESULTS (ppm)	GEOTECH SAMPLE OR CORE BOX NO.	ANALYTICAL SAMPLE NO.	BLOW COUNTS- RECOVERY		
11 11 111111	CL	LEAN CLAY (CL) Firm, moist, dark olive brown (2.5 Y 3/3), mostly clay, trace to little sandFILL-						10
12								-12
13								12
12 13 14 15 16 17 17 17 17 17 17 17 17 17 17 17 17 17		LEAN CLAY (CL) Same as above.						15
17 /		Note: Visible water in clay pockets, moist but not saturated.						-16 -17
19		<u>LEAN CLAY (CL)</u>						-18 -19
21		Same as above, becoming black with depth. Has the plasticity of modeling clay.						-20 -21
23								-22 -23
24							B.O.E at 24 feet. Installed 10 feet of	-24
25 -							E	<b>-2</b> 5
26								<b>-2</b> 6
27								-27
MRF Form P	DA-FTCc	PROJECT: Landfill 5, Gas Prob	es			Н	OLE NO.: LF5GP-6	-28

			НТ	ΓW	DRIL								HOL	E NO. LFBG	P-1
, COMP	ANY NAME		. Ta.fa.a. 1	1				CONTRACTO	R				SHE		
_		ment and	Infrastruc	ture		Site S	Service		_				TOF	2 SHEET	S
3. PROJ Landi							4. LOC		C	olorado Sp	rinas	CO			
	OF DRILLE	R								DESIGNATION					
	is Edlema						CME			DE 010117 11011	0. 0				
7. SIZE	S AND TYPE LING AND S PMENT	S OF	4.25 in II	) Hol	low Stem	Auge	8. HOL	E LOCATION							
EGUI	LING AND S. PMENT	AMPLING	Continuo				Nort			7.177780,	Easti	ng:3.	201266.	284120 ,	NADB:
								FACE ELEV	AT!	ION					
								3.15 feet							
								ARTED	1		$\overline{}$	OMPLE			
12 OVE	RBURDEN TI	JICKNESS	<u> </u>					8/18/97	1.	IME: TER FIRST EI		E: 8/1		TIME:	ACE
		13.0 feet						9.0 feet	700		E: 8/18		TIM		ACE
		INTO ROCK							ER	AND TIME HE			1.217		
	encounte							NA.0 feet		DAT			TIM	E:	
	AL DEPTH C	F HOLE							LE	VEL MEASURE	MENTS	(SPEC	CIFY)		
13.0 f							None	)							
8. SAM	PLES FOR G	EOTECHNIC	AL TESTING	DIS	TURBED	UNDIS	TURBED			MBER OF COP	RE BOXE	S			
20 611	IDI EC ECC	DUCKTON			NA		NA		IA	TUES (55-55-	-V. T		100	\   at =c=:	
ANA	PLES FOR O	PHENICAL	VOC		METAL	5	OTHER	(SPECIFY)	0	THER (SPECI	- YJ   01	HER	ISPECIFY	21. TOTAL	
	NA		NA	ľ	NA			NA		NA		1	NA	NA	
22. DIS	POSITION C	F HOLE	BACKFILLE	n	MONITORING	WELL	OTHERS	(SPECIEY)	23	. INSPECTOR				INA	
									آ ا						
			NA		NA		Gas	Probe	IJ.	Gillespie					- 1
							ELD	GEOTEC	Ĥ	ANALYTICAL					-
DEPTH	USCS	DES	CRIPTION OF M	4ATER	IALS		ENING	SAMPLE O		SAMPLE NO.	COUNT		R	EMARKS	
а	b c						d	e		f	g	-'''		<u>h</u>	
3	GP	7 Gravel Ba	150			۱ '	0.0					1	Depth is i	n Feet.	E
3	SC /				·	1					1			ple Headsp	ace E
1,3	1//		2410 (00)									- 1	Screening	-	E
` <b>∃</b>			<u>SAND (SC)</u> bist, light yellowis	sh hrav	un (25 Y	Luc	5=0.0			}		11	NA = Not	Applicable	E
3	//		tly fine sand, so				1-0.0 DDM								F
2 =	//	coarse sa	and and clay, litt	tle silt.											E
- =	//				-FILL-		,								E
=	//											- 1	,		E
3 -	//									1		1			E
Ŭ	//						3.0								E
=	//	CLAYEY S	SAND (SC)												E
1	//		oist, light olive bi					Į				- 1			E
7	//		ne sand, some me	edium s	and and	l						- 1			E
=	//	clay, plas	SHC.				0.0=8 mqc				1	- 1	Siltstone	clogged co	ore E
5-						[ '	- P 111			}	!		barrel, or recovery	nly 2 feet o	f E
3	//									1	1		recovery	•	E
1	//									1					E
6-	//											- (			ore f
0 -			SAND (SC)	nne!+-	alau					1					=
6 7 8 9		Same as content.	above with incre	easing	ciay	1									E
7		Content.				H:	5=0.0					1			
/=	//					1	ppm					- 1			1
3	//														E
	//										İ				1
8 -	//	DI AVEV	CANO (CC)					-							
3	//		SAND (SC)	ivo bro	Nun 12 E V			1							
3	//		above, moist, oli aturated below 9				<b>C</b> -0.0					- 1			
9 -	//	7,31. 30	statuted below a	,,0 166			S=0.0 ppm							reading= 1.	5 ppm
	//											1	H2S		
	//										Į.	1			
	17.7	1	0.15.67						_				01.5		
		I PR	OJECT:		Landf	III 6						T H	OLE NO.	: LF6	GP-1

00110		HTW DRIL		OG				HOLE NO. LF6GP-	7
RUST	Environ	ment and Infrastructure	J. Gillespie					SHEET 2 OF 2 SHEETS	1
EPTH a	ь	DESCRIPTION OF MATERIALS	FIELD SCREENING RESULTS (ppm) d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO.	BLOW COUNTS- RECOVERY		REMARKS	
11 12 12	SC GP	CLAYEY SAND (SC) Wet, olive brown (2.5 Y 4/3), mostly fine to medium sand with some clay, plastic.	HS=0.0 ppm				Multiga ppm H2	s reading = 1.5	minulandandanda
intimport		Gravet alluyium.							المعمريساليسياليس
ուվայրուկուր									etereste milionites
milmitimi									<u> </u>
milmitum									manhantan
mminimin									minatente
duntunlini									ndraggagianal
unluntunlun									minutualin
milmitanti									nhandandanda
111111		PROJECT: Landfil	1 6				OLE NO		Tarabana and

			HT	W DRIL								HOLE	NO. LF6GP-2
. COMP	ANY NAME		I Today				CONTRACTO	R				SHEE	TI
		ment and	Infrastructi	ıre	Site S	ervice		_				OF	2 SHEETS
3. PRO. Land						4. LOC		Cr	olorado Sp	orinas C	0		
	E OF DRILL	ER						_	DESIGNATION				
Denn	is Edlema	an				CME							
7. SIZE	S AND TYP LING AND S PMENT	ES OF		Hollow Stem	Auger	8. HOL	E LOCATION						
EGÜ	PMENT	AMP LING	Continuous	Core						Easting	j:3200	0211.9	97400 , NAD
							FACE ELEV		ION				
							ARTED			14. 001	PLETE		
		,					8/18/97	ĪΤ	IME:		8/18/9		TME:
12. OVE	RBURDEN T	HICKNESS				_ k							ROUND SURFACE
		13.0 feet					12.0 feet			re: 8/18/9		TIME	
I3. DEP	TH DRILLED	INTO ROCK				16. DEF	TH TO WAT	ER	AND TIME ME				
	encounte					DEPTH	NA.0 feet		DA.	TE:		TIME	:
	AL DEPTH	OF HOLE				17. OTH	ER WATER	LE	VEL MEASURE	MENTS (S	PECIFY	)	
13.0						None							
Id. SAM	PLES FOR (	SEOTECHNIC	AL TESTING	DISTURBED	UNDIS	TURBED			MBER OF CO	RE BOXES			
20 541	IPLES FOR	CHEMICAL	VOC	METAL	e 1	NA	(SPECIFY)	IA	TUED /COSC	CV) I CT	D (C-	.07	To. 707.
AN/	MPLES FOR ALYSIS	WILLIAM .		METAL	.0	UTHER	(SPECIFY)	۳	THER (SPECI	FT) OTHE	K (SPE	CIFY)	21. TOTAL CORE REC.
	NA	ļ	NA	NA		1	NA		NA		NA		NA NA
22. DIS	POSITION (	OF HOLE	BACKFILLED	MONITORIN	G WELL	OTHERS	(SPECIFY)	23	. INSPECTOR				INA
			NA	NA		Gas	Probe	J.	Gillespie				
					FIE	ELD	GEOTECH	_		BLOW	7		
DEPTH	USCS	DES	CRIPTION OF MA	TERIALS	RESULT	ENING (S (ppm)	SAMPLE O CORE BOX I	R NO.	ANALYTICAL SAMPLE NO.	BLOW COUNTS- RECOVER	;	RE	MARKS
а	p		c		<u> </u>	u	е		1	g			h
3	GP CL	7 Top soil.			] 0	.0					Dept	h is in	Feet.
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1					7						HS =	Samp	le Headspace
1-3		LEANCIA	Y WITH GRAVEL (	CL)								_	Results
当		Medium sti	ff. drv. dark olive:	hrown (25 Y							NA =	· Not A	Applicable
Ξ.		4/2), most	ly clay, little fine sand.	gravel and fine							1		
2 -						-0.0				i	1		
=	1//				P	m.							
Ξ									l				ele Headspace Results Applicable
3 =	1//				1							,	
					1								
=											1		
<u>⊿</u> <u>∃</u>													
, i					4	.0							
=	///								-				
5-	//								Ì	Ì			
- =	///										1		
=	//	LEAN CLA	Y (CL)										
6-3	1//	Stiff, mois	t, dark olive brown y, little fine to me	(2.5 Y 4/2),									
Ŭ	1//	coarse sa	nd, occasional 2 f	oot thick fine						l	1		
=	//	gravel len	ses.			=0.0 m							
7.3	1//				"	J.11							
/ E	1//								İ				
ā	1//				1								
,自	1/2												
8-	1/1									1			
					1		1		1	1	1		
耳					1		ı		}	1	1		
7									Ì				
6 1111111111													
9 mluuluut													
0													

RUST Environment and Infrastructure  DESCRIPTION OF MATERIALS  C  LEAN CLAY (CL) Stiff, olive brown (2.5 Y 4/4), mostly clay, trace to few fine sand, plastic.  2. INSPECTOR J. Gillespie  SHEET 2 OF 2 SHE SAMPLE OR SAMPLE OR COUNTS—RECOVERY ANALYTICAL BLOW SAMPLE NO. COUNTS—RECOVERY T  SHEET 2 OF 2 SHE  ANALYTICAL SAMPLE NO. COUNTS—RECOVERY T  LEAN CLAY (CL) Stiff, olive brown (2.5 Y 4/4), mostly clay, trace to few fine sand, plastic.	ETS
DEPTH USCS DESCRIPTION OF MATERIALS FIELD SCREENING RESULTS (ppm) CORE BOX NO.  FIELD GEOTECH ANALYTICAL BLOW SAMPLE NO. COUNTS- REMARKS RESULTS (ppm) CORE BOX NO.	
LEAN CLAY (CL) Stiff, olive brown (2.5 Y 4/4), mostly clay, trace to few fine sand, plastic.	
12 Bottom of explora	10 = 11 tion at = 12
LEAN CLAY WITH SAND (CL)  Moist, mottled gray with olive yellow (2.5 Y  6/6), mostly clay with little fine sand,	eet of et of creen
saturated at end with fine grayel.	14
15 - 1	15 16 17 18 19 20
16 1	-16
17 - 11	17
	18
19 - 1	E-19
21-3	20
22 -	-22
23 -	23
24 = 1	-24
25   1	25
26	-26
27 -	27
PROJECT: Landfill 6 HOLE NO.: LFill	28 0GP-2

			НТ	W DRIL	LIN	G L	OG			Constitution		HOLE	NO. LF6GP-3
. COMP	ANY NAME						CONTRACTO	)R				SHEE	
		ment and	Infrastruct	ure	Site	Service						OF	2 SHEETS
and Land	0.00					4. LOC		Cc	olorado Sp	orinas (	`0		
	E OF DRILLE	R							DESIGNATION				
Denn	is Edlema	∃n				CME7	75						
. SIZE	S AND TYPE LING AND S PMENT	ES OF		Hollow Sten	n Auge	r 8. HOLI	E LOCATION						
EGUI	PHENT	AMPLING	Continuou	s Core					9.001780,	East	ng:3	20038	8.313630, NA
							FACE ELEV		ION				
							1.34 feet			Lu -001	101 57		
						_	8/18/97	1-1	IME:	II. CO			IME:
2 0/5	RBURDEN TI	HICKNESS											ROUND SURFACE)
	ter then		ŀ				:13.0 feet	אמנ		TE: 8/18/9		TIME	
	TH DRILLED							FR	AND TIME ME			102111	
	encounte					_	NA.0 feet		DAT			TIME	
	AL DEPTH C								VEL MEASURE		PECIF		
14.0						None							
B. SAM	IPLES FOR G	EOTECHNIC	AL TESTING	DISTURBED	UNDIS	TURBED	19. TOTAL	NU	MBER OF COF	RE BOXES			
				NA NA	<u> </u>	NA	1	۱A					
20. SAI	MPLES FOR (	CHEMICAL	VOC	META	LS	OTHER	(SPECIFY)	0	THER (SPECI	FY) OTH	ER (S	PECIFY)	
-1111			NA	NA	4		٧A		NA		N/	۸	CORE REC.
	NA							L			147	`	NA
22. DIS	POSITION O	F HOLE	BACKFILLE	MONITORIN	NG WELL	OTHERS	(SPECIFY)	23	. INSPECTOR				
			NA	NA NA	١	Gas	Probe		0:11				
			L					_	Gillespie	,			
DEPTH	uscs	DES	CRIPTION OF M	ATERIALS	SCRE	ELD	GEOTECH SAMPLE O CORE BOX	H NR	ANALYTICAL SAMPLE NO.	BLOW COUNTS RECOVER	_ [	Do	MARKS
а	Ь		c		RESUL	TS (ppm)	CORE BOX	NO.	t to	RECOVER	Υ	rsc.	h
	GP C					0.0		_	<del> </del>		+		
3		Z Top soil.			┧ `	5.0					De	pth is in	Feet.
1 2 3	1//												ole Headspace
1-3	//	LEAN CLA	Y (CL)							l	- 1	reening	
3		Moderate	y stiff, dry, olive	brown (2.5 Y							INA	= NOT /	Applicable
3	1//	trace coa	Y (CL) ly stiff, dry, olive tly clay, little to arse sand to fine	urace fine sand, gravel.									
2 -			, , , , , , , , , , , , , , , , , , ,			0.0 mqq							
=	1//				1 ,	, 111							
Ē	(//											,	
3 =	//											-	
=	1/												
Ξ	///									l	1		
4 =													
3						4.0							
=	1//	LEAN CLA Same as a	Y (CL)										
5 🗐	///	Same as a	above.		1								
=	1/				1					]			
<u>,</u> =	1//									1			
6 -										[			
7	1/2					=0.0							
_ =	1//				f	opm			[				
/ =	//	Increasing	g clay content a	t 6 feet.	1					1			
Ĕ	1/				1					1			
_ =	///												
8-3	//									1			
=	//				[					I			
Ξ	1//												
9 =	(//									1			
3	//												
-7	///						[		[				
Ξ	///				1		ı			1			

		HTW DRIL		OG			HOLE NO.	9-3
RUST	Environ	ment and Infrastructure	J. Gillespie				SHEET 2 OF 2 SHEET	
DEPTH	b	DESCRIPTION OF MATERIALS	FIELD SCREENING RESULTS (ppm) d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO.	BLOW COUNTS- RECOVERY		
11 12 13 13 13 13 13 13 13 13 13 13 13 13 13	CL	LEAN CLAY (CL) Soft, moist, olive grey (2.5 Y 4/3), mostly clay, plastic.					·	nulundandandandanda
13		Saturated clay with fine sand.					Water encountered at 13.0 feet. Bottom of exploration 14.0 feet	E
Е								mutum
15 16 17 18 19 19 19 19 19 19 19 19 19 19 19 19 19								metacodo
17 m								
18 mm/1111								1
19								tuliani.
20-							,	ralaaa)
21-11								سرائيسلسين
22								and to make the
23	ĺ							
24 4								22001 1 2222 2222 222
25								TI TITITE
26								transfer (
27 -								سأسيش
=				)				E

		H.	TW	DRIL	ITN	GI	OG					но	LE NO.
I. COMPANY NAME							CONTRACTO	)R		_		SH	LF6GP-
RUST Environ	ment and	Infrastru	cture	2	Site S	Service						OF	2 SHEETS
Landfill 6						4. LOC		Co	olorado Sp	orin	as Co	0	
5. NAME OF DRILLE	ER								DESIGNATION				
Dennis Ediema		1	<u> </u>			CME							
7. SIZES AND TYPE ORILLING AND S EQUIPMENT	ES OF SAMPLING	4.25 in I		ollow Stem	Auge	r 18. HOL Norti	<b>E LOCATION</b> bina:1332		8.763420,		Fastir	na:3200.	575.336380.
Edotricki		Continuo	03 0	010			FACE ELEV					19.0200	0.000000,
							.60 feet						
		ļ					8/19/97	TI	ME:	_		19/97	TIME:
12. OVERBURDEN T								1					GROUND SURFACE
Greater then							: 10.5 feet				/19/97	TII	ME:
13. DEPTH DRILLED Not encounte							NA.0 feet		AND TIME ME		RED	TT	
14. TOTAL DEPTH O									/EL MEASURE		TS (SP		۹۲.
14.0 feet	SEOTERIA DE	AL TESTINE		27110050		None							
ID. SAMPLES FOR C	SEUTECHNIC	AL IESTING	01	STURBED NA	UNDIS	NA		. NU ∤A	MBER OF COF	KE B	DXE5		
20. SAMPLES FOR	CHEMICAL	VOC		METAL	.S	OTHER	(SPECIFY)	_	THER (SPECI	FY)	OTHE	R (SPECIF	Y) 21. TOTAL
		NA		NA			VA.		NA			NA	CORE REC.
NA 22. DISPOSITION C	OF HOLE	BACKFILL	FD	MONITORIN	BWEIT			22	INSPECTOR			INA	NA
	71 71322				3 WELL			23.	. INSPECTOR				
		NA		NA		Gas	Probe	J.	Gillespie				
DEPTH USCS	DES	CRIPTION OF	MATE	RIALS	SCRE RESUL	ELD ENING TS (ppm) d	GEOTECH SAMPLE O CORE BOX e	R NO.	ANALYTICAL SAMPLE NO. 1	COL	LOW JNTS- OVERY		REMARKS
GP CA	TOD COIL	OP SOIL (ORGANICS AND CLAY)				0.0				$\vdash$		Depth is	in Feet
	107 5011	TURGANICS AN	NU CLA	(4)									mple Headspace
1 = CL		<del></del> - <del></del>			-							Screenin	g Results
3 1												NA = No	t Applicable
2 - CL					HS	=0.0							
	SILT (ML) Loose, dry	, very dark gre	evish b	rown (2.5 Y		D.M		ı					
3 //	3/2), most	i, very dark gre ly silt, little fine to medium grav	e to me vels.	edium sand,									
3-		<b>3</b>											,
4 //													
					4	1.0						ļ	
1 //	LEAN CLAY	Y (CL)		(0.5.)(4./5)									
5-	mostly clay	t to dry, olive t y trace fine sa	nd.	(2.5 Y 4/3),									
6-3								- {					
3 1//						=0.0 pm							
7-3 (//													
3 //													
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Ee	I CAN OL L	v (OL)											
3 ///	LEAN CLAY Same as a	bove.			ł .	9.0						Water en 9.0 feet	countered at
7 //						=0.0		- 1		I		1 5.5 ,666	
					P	bw		ı	-				

		HTW DRII		OG				HOLE NO. LF6GP-4	1
	ANY NAME TEnviron	nment and Infrastructure	2. INSPECTOR J. Gillespie					SHEET 2 OF 2 SHEETS	1
OEPTH	uscs	DESCRIPTION OF MATERIALS	FIELD SCREENING RESULTS (ppm)	GEOTECH SAMPLE OR CORE BOX NO.	SAMPLE NO.	BLOW COUNTS- RECOVERY		REMARKS	1
8	CL //	c	9.0	e	1 1	g g		h	10
11 11 11 11 11 11 11 11 11 11 11 11 11		LEAN CLAY WITH SAND (CL) Saturated, olive brown (2.5 Y 4/3), mostly clay, some medium to fine sand, plastic.							11 12
12	SP	POORLY GRADED SAND (SP) Loose, saturated, granitic sands, mostly	HS=0.0 ppm				Water	r may be under sure	12
13 -1		coarse, little medium, trace fine. —ALLUVIUM—					Botto	om of exploration at	-
14	[///////						14.0 f	feet.	14
15									15
16									16
17 mmi									E
17 18 110 110 110 110 110 110 110 110 110									E-18
19									19
20								,	20
21									-21
22									-22
23									-23
24									E -24
25									-25
26									-26
27									-27
1									1:
MRF Form P	'OA-FTCc	PROJECT: Landf	ill 6			Н	OLE N	IO.: LF6GP-4	E <sub>28</sub>

			Н	۲W	DRIL	LIN	GIO	OG.					HOLE	NO. LFBGP=	-
	ANY NAME			5/ 5/07		2. DRILI	ING SUBO	CONTRACTO	OR .				SHEE	Ŧ.	-
		ment and	Infrastruc	ture		Site S	Service						OF	2 SHEETS	_
. PROJ Landi							4. LOCA	Carson,	Colo	rado So	rina	s Co	)		
	OF DRILLE	R						UFACTURE							$\dashv$
Denni	is Edlema	an .					CME7								
7. SIZE	S AND TYPE LING AND S PMENT	S OF AMPLING			llow Stem	Auge		E LOCATION		600430	. Ea	atio	~:3300030		NA -
EQUI	PMENT		Continuo	us C	ore			FACE ELEV			, ca	Sting	J.3200938	).566350, I	MAL
								.87 feet		•					
								ARTED			11.	COMP	LETED		$\dashv$
							1	8/19/97	TIME		. 1			IME:	
	RBURDEN TI													OUND SURFAC	E)
		15.0 feet	7.7					10.0 feet			FE: 8/		TIME	<u> </u>	$\dashv$
	encounte							NA.0 feet		DAT			TIME		$\neg$
4. TOT	AL DEPTH C	OF HOLE						IER WATER	LEVEL	MEASURE	MENT	S (SP	ECIFY)		$\dashv$
5.0 f							None			<u> </u>					
B. SAM	PLES FOR G	EOTECHNIC	AL TESTING	OI	STURBED NA	UNDIS	NA		. NUMB VA	ER OF COR	RE BO	XES			
0. SAN	PLES FOR O	CHEMICAL	VOC		METAI	 _S		(SPECIFY)	<del></del>	ER (SPECI	FY) T	OTHE	R (SPECIFY)	21. TOTAL	$\dashv$
ANA	ALYSIS													CORE REC.	
	NA		NA		NA			1A		NA			NA	NA	1
2. DIS	POSITION O	F HOLE	BACKFILLE	0	MONITORIN	G WELL	OTHERS	(SPECIFY)	23. IN	NSPECTOR					$\exists$
		İ	NA		NA		Gas	Probe	١, ,	illaania					
	J				<u> </u>	F	(ELD	GEOTEC		illespie	BI	OW	1		
DEPTH	US <b>CS</b>	DES	CRIPTION OF	ATE	RIALS	SCR	ENING	SAMPLE C	DR S	AMPLE NO.	COU	NTS-		MARKS	
a	b		С			NESUL	d (ppm)	e e	NU.	f		VERY		h	
=	GP CV	7 Top soil.											Depth is in	Feet.	E
1 2	CL				·	1					1		HS = Samp	le Headspac	e E
1													Screening		e
3		OT: T ::											NA = Not A	pplicable	E
, =			<u>t SAND (ML)</u> soft, dry, dark	arevi	sh brown (2.5										E
2 =		Y 4/2), mo	ostly silt, trace	fine g	ravel, little to				- 1						1
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		1 - 10	OCCI.		Landf	111 10							HOLE NO.:	LF6GP-	5

	HTW DRILLING LOG													
I. COMP	ANY NAME		2. INSPECTOR	00			SHEET 2	-						
DEPTH		DESCRIPTION OF MATERIALS	J. Gillespie	GEOTECH SAMPLE OR	ANALYTICAL SAMPLE NO.	BLOW	OF 2 SHEETS	-						
а	b	C C	FIELD SCREENING RESULTS (ppm)	CORE BOX NO	f	BLOW COUNTS- RECOVERY	REMARKS h Water encountered at	-10						
11 12 13 14 15 16 16	CL	LEAN CLAY WITH SAND (CL) Soft to stiff, saturated, olive brown (2.5 Y 4/3), mostly clay with some fine to medium sand; appears to be bedded in some areas and massive in others.					10.0 feet.	11						
12							Water appears to be under pressure. Rising	E						
14 1					1		quickly inside of auger.	13						
15		Lean clay in shoe at the bottom.						E-14						
16								-15						
17 -								-16						
18 11								2-17 Errenten						
1 4							·	18 18						
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		000 000						2						
		.P.R/OJECT: Landfill	6			Н	OLE NO.: LFSGP-5	E <sub>28</sub>						



### MONITORING WELL LF2-GP1 ABOVE GROUND WELL COMPLETION DETAILS PROJECT: FORT CARSON DRILLING METHOD: BME 175 W/3.25" ID HSA DRILLING COMPANY: SITE SERVICES DATE COMPLETED 02/19/98 FIELD GEOLOGIST: \_\_J. GILLESPIE LOCATION: LANDFILL 2 PERMIT NO. \_\_\_ N/A STATIC DEPTH TO WATER: N/E GUARD POST -PROTECTIVE CASING YES/NO Diameter: 3" Type: STEEL Diameter: 4 X 4 INCH Type: STEEL Locked: MASTERLOCK Key #: #2599 Length: 5.0 FT Vented Cap VES/NO Number: 3 - 4" CONCRETE (1" SLOPING MIN) 2.5 FT AGS 5799.036799 DEPTH (ft) -GROUND SURFACE ELEV. 5796.026108 CONCRETE COLLAR YESZNO Concrete: 90 LB. \_:bs+Water: \_ Total Quanity: 10 BAGS + 3 FOR POSTS 4.0 FT 1115 SAKRETE Manufacturer: \_\_\_\_ ANNULAR SPACE SEAL YES NO 5.5 FT 1015 TOP OF GRANULAR Type: NEAT BENTONITE/CEMENT 5.0 FT 1005 TOP OF FINE SAND Mix: 2-3 Ib bentonite + 6-7 go: H<sub>2</sub>0 5.5 FT 0915 TOP OF PEA GRAVEL + 94 \_\_\_lb\_concrete mix Total Quanity <u>N/A</u> gal Manufacter: <u>HOLEMAN TYPE 1/II</u> Mud Wt: <u>N/4</u> lbs/gal 8.5 FT BENTONITE SEAL Bentonite Type: \_5\_FT\_CRUMBLES/15\_PELLETS Quantity: 20 (gal) or lbs (Circle) Hydrated: 3 gal H<sub>2</sub>O Time: .5/30 MIN Manufacturer: CETCO WELL CASING Flush threaded: YESYNO Tefton Tape: YES(NO) O-rings: YES NO Manufacturer: ALLIED PIPE -FILTER PACK Material/Mesh size: PEA GRAVEL Product Name: PEA GRAVEL # bags: 4 Total lbs: 50 LBS BAGS Manufocturer: LANDSCAPE SUPPLY SCREEN Total length: 9.98 Type: PVC Type: PVC Schedule: 40 OD: \_11 FT ID: .09 FT Length/sec: 1/9.95 Slot size: \_0.026 INCH\_SLOT No\_slots/ft: 46/FT 18.5 FT Length from slots to end of section: TOP .21 FT/BOT. .34 FT Manufacturer: \_\_\_\_\_ALLIED PIPE 19.0 FT -BOTTOM CAP OR PLUG Type: PVC SLIP ON Length: 15 FT MATERIAL BELOW WELL-PEA GRAVEL Monufestuner: ORESTUNE REMARKS: STRAIGHTNESS CHECKED OK - (YES) OR NO REFERENCE MEASURING POINT LOCATION/DESCRIPTION: GROUNG SURFACE DEPTH TO WATER AFTER COMPLETION: N/E SIGNATURE OF PREPARER J. GILLESPIE NOT TO SCALE

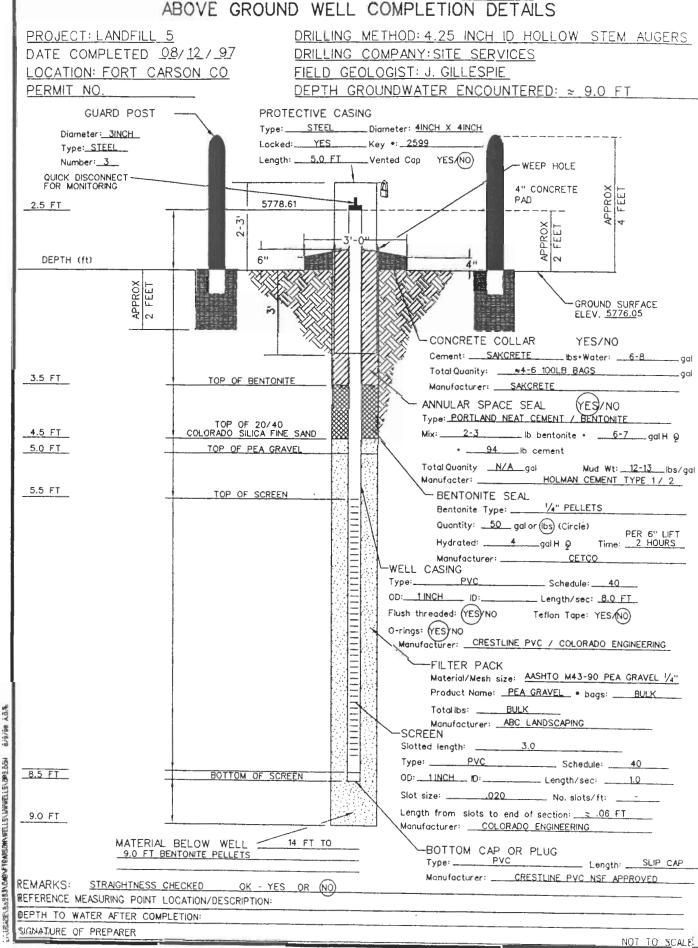
# MONITORING WELL LF2-GP2 ABOVE GROUND WELL COMPLETION DETAILS DRILLING METHOD: 3.25" ID HSA PROJECT: FORT CARSON DRILLING COMPANY: SITE SERVICES DATE COMPLETED 02/18/98 FIELD GEOLOGIST: J. GILLESPIE LOCATION: LANDFILL 2 STATIC DEPTH TO WATER: N/E PERMIT NO. \_\_\_N/A PROTECTIVE CASING YES/NO GUARD POST-Type: STEEL Diameter: 4 X 4 INCH Diameter: 3" Type: STEEL Locked: MASTERLOCK Key #: #2599 Length: 5.0 FT Vented Cap (FE)/NO Number: 3 - 4" CONCRETE (1" SLOPING MIN) 5797.614042 2.5 FT\_\_ DEPTH (ft) GROUND SURFACE ELEV. 5794.661806 CONCRETE COLLAR (ES)NO Cancrete: 90 LB. | bs+Water: \_\_\_ Total Quanity: 10 BAGS + 3 FOR POSTS Manufacturer: SAKRETE 4.5 FT ANNULAR SPACE SEAL YES YOU 5.5 FT CRUMBLES 1630 2/18 .5 FT Type: NEAT BENTONITE / CEMENT .5 FT CRUMBLES 6.0 FT FINE SAND Mix: 1-2 | Ib bentonite + 6-7 | as 8-9.5 FT FINE SAND 6.5 FT TOP OF SAND + 90 \_\_\_ lb concrete mix Total Quanity N/A gal Manufacter: HOLEMAN TYPE 1/11 Wtt: N/A los/gal 8.5 FT BENTONITE SEAL Bentonite Type: \_5 FT\_CRUMBLES/15 PELLETS Quantity: 3-4 (gal) or lbs (Circle) Hydrated: 3 gal H<sub>2</sub>O Time: .5/30 MIN Monufacturer: CETCO WELL CASING Type: PVC Schedule: 40 OD: .11 FT | ID: .09 FT | Length/sec: 10/9.98 Flush threaded: (YES)NO Teflon Tape: YES,(NO) 0-rings: YES NO Manufacturer: ALLIED PIPE Material/Mesh size: PEA GRAVEL Product Name: PEA GRAVEL # bags: 4 Total lbs: 50 LBS BAGS Manufacturer: LANDSCAPE SUPPLY -SCREEN Total length; 4.98 FT Type: PVC 13.5 FT Slot size: 0.020 INCH SLOT No. slots/ft: 46/FT Length from slots to end of section: TCP .21 FT/BGT 34 FT Manufacturer: ALLIED PIPE BOTTOM CAP OR PLUG Type: PVC SLIP ON 14.0 FT Manufacturer: CRESTLINE Length: 15 FT .5 FT PEA MATERIAL BELOW WELL-GRAVEL REMARKS: STRAIGHTNESS CHECKED OK - (YES) OR NO REFERENCE MEASURING POINT LOCATION/DESCRIPTION: GROUND SURFACE DEPTH TO WATER AFTER COMPLETION: N/E SIGNATURE OF PREPARER J. CILLESPIE

#### MONITORING WELL LF2-GP3 ABOVE GROUND WELL COMPLETION DETAILS DRILLING METHOD: 3.25" ID HSA PROJECT: FORT CARSON DRILLING COMPANY: SITE SERVICES DATE COMPLETED 02/19/98 FIELD GEOLOGIST: J. GILLESPIE LOCATION: LANDFILL 2 STATIC DEPTH TO WATER: \_\_\_ PERMIT NO. N/A PROTECTIVE CASING YES/NO GUARD POST -Type: STEEL Diameter: 3 X 3 INCH Diameter: 3" Locked: MASTERLOCK Key #: #2599 Type: STEEL Length: 5.0 FT \_\_\_\_Vented Cap YES NO Number: 3 WEEP HOLE 4" CONCRETE (1" SLOPING MIN) 5804.483112 2.5 FT 2-3' DEPTH (ft) -GROUND SURFACE ELEV. 5801.485104 2 CONCRETE COLLAR YES INO Concrete: 90 LB. \_\_\_lbs+Woter: \_\_\_ Total Quanity: 10 BAGS + 3 FOR POSTS 3RD LIFT SAKRETE 8.0 FT 4TH LIFT Manufacturer: \_\_\_\_ ANNULAR SPACE SEAL YES YNO 10.0 FT 15:15 10.5 FT 14:45 TOP OF BENTONITE CRUMBLES Type: NEAT BENTONITE/CEMENT TOP OF FINE SAND \_\_\_\_\_ Ib bentonite + $\frac{5-7}{}$ gal H<sub>2</sub>0 11.5 FT 14:45 HYDRATE TOP OF PEA GRAVEL + 100 lb concrete mix Total Quanity N/A gal Mud Wt: <u>N/A</u>lbs/gal Manufacter: HOLEMAN TYPE I/F 13.96 FT BENTONITE SEAL Bentonite Type: .5 FI CRUMBLES/1.5 FT 1/4" PELLEIS Quantity: 3-4 gol or (lbs) (Circle) Hydrated: \_\_\_\_gal H<sub>2</sub>O Time: .5/30 MIN Manufacturer: CFTCO WELL CASING \_\_\_\_ Schedule: <u>40</u> Type: PVC OD: .11 FT ID: .09 FT Length/sec: 2/9.88 Flush threaded: (YES)NO Teflon Tope: YES (NO) 0-rings: YES NO Manufacturer: ALLIED PIPE -FILTER PACK Material/Mesh size: PEA GRAVEL Product Name: PEA GRAVEL # bogs: 6.5 Total ibs: 50 LBS BAGS Manufacturer: LANDSCAPE SUPPLY -SCREEN Total length: 9.98 FT Schedule: 40 Type: PVC OD: 11 FT ID: .9 FT Length/sec: 9.88/1 Slot size: 0.020 INCH SLOT No slots/tt: 46/FT 23.84 FT Length from slots to end of section: TOP .21 FT/BOT. .34 FT Manufacturer: ALLIED ENVIRONMENTAL BOTTOM CAP OR PLUG 24.5 FT Length: \_\_\_13 FT .5 FT PEA MATERIAL BELOW WELL-Manufacturer: SPEARS PVC NSF APPROVED GRAVEL REMARKS: STRAIGHTNESS CHECKED OK - (YES) OR NO REFERENCE MEASURING POINT LOCATION/DESCRIPTION: BELOW GROUND SURFACE DEPTH TO WATER AFTER COMPLETION: N/E SIGNATURE OF PREPARER J. GILLESPIE NOT TO SCALE

## MONITORING WELL LF2-GP4 ABOVE GROUND WELL COMPLETION DETAILS DRILLING METHOD: BME 75W/3.25" ID HSA PROJECT: FORT CARSON DRILLING COMPANY: SITE SERVICES DATE COMPLETED 02/19/98 FIELD GEOLOGIST: J. GILLESPIE LOCATION: LANDFILL 2 STATIC DEPTH TO WATER: N/E PERMIT NO. \_\_\_N/A PROTECTIVE CASING YES/NO GUARD POST -Type: STEEL Diameter: 4 X 4 INCH Diameter: 3" Locked: MASTERLOCK Key #: #2599 Type: STEEL Length: 5.0 FT Vented Cop (ES/NO Number: 3 WEEP HOLE 4" CONCRETE PAD (1" SLOPING MIN) 5815.433252 2.5 FT DEPTH (ft) GROUND SURFACE ELEV. 5812.358462 CONCRETE COLLAR YES/NO Concrete: 90 LB. Ibs+Water: 1-2 Total Quanity: 10 BAGS + 3 FOR POSTS SAKRETE 9..5 FT Manufacturer: \_\_\_ ANNULAR SPACE SEAL YES YNO 1.0 FT PELLETS Type: NEAT BENTONITE/CEMENT .5 FT CRUMBLES .5 FT FINE SAND Mix: $\frac{2}{}$ 1b bentonite + $\frac{6-7}{}$ gal H $_2$ O 11.5 FT + 90 \_\_\_\_lb concrete mix Total Quanity 10 gal Mud Wt: N/A lbs/gal Manufocter: PORTLAND 13.5 FT - BENTONITE SEAL Bentonite Type: .5 FT CRUMBLES/1.5 FT 1/4" PELLETS Quantity: 2-5 gal or (bs) (Circle) Hydroted: 3 gal H<sub>2</sub>O Time: <u>.5 FT/30 MIN LIFT</u> Manufacturer: CETCO WELL CASING Type: PVC Schedule: 40 Flush threaded: (YES)NO Teflan Tope: YES (NO) O-rings: YES NO Monufacturer: ALLIED PIPE -FILTER PACK Material/Mesh size: PEA GRAVEL Product Name: PEA GRAVEL # bags: 6 Total Ibs: 50 LBS BAGS Manufacturer: LANDSCAPE SUPPLY -SCREEN Total length: 9.98 FT Type: PVC Schedule: 40 23.5 FT Slot size: 0.020 INCH SLOT No. slots/ft: 46/FT Length from slots to end of section: TOP .21 FT/BOT. .34 FT Manufacturer: ALLIED PIPE BOTTOM CAP OR PLUG Type: PVC SLIP ON 24.0 FT MATERIAL BELOW WELL PEA GRAVEL REMARKS: STRAIGHTNESS CHECKED OK - (YES) OR NO REFERENCE MEASURING POINT LOCATION/DESCRIPTION: GROUND SURFACE DEPTH TO WATER AFTER COMPLETION: N/E SIGNATURE OF PREPARER J. GILLESPIE NOT TO SCALE

#### GAS PROBE MONITORING WELL LF5GP-1 ABOVE GROUND WELL COMPLETION DETAILS PROJECT: LANDFILL 5 DRILLING METHOD: 4.25 INCH ID HOLLOW STEM AUGERS DATE COMPLETED <u>08/11/97</u> DRILLING COMPANY: SITE SERVICES LOCATION: FORT CARSON CO FIELD GEOLOGIST: J. GILLESPIE PERMIT NO. DEPTH GROUNDWATER ENCOUNTERED: NOT ENCOUNTERED GUARD POST PROTECTIVE CASING Type: STEEL Diameter: 4INCH X 4INCH Diameter: 3INCH Locked: YES Key •: 2599 Type: SIEEL Length: 5.0 FT Vented Cap YES (NO) Number: 3 -WEEP HOLE QUICK DISCONNECT FOR MONITORING 4" CONCRETE 5785.84 2.5 FT 6" DEPTH (ft) -GROUND SURFACE ELEV. 5782.95 2 CONCRETE COLLAR YES/NO Cement: SAKCRETE bs+Water: 6-8 Total Quanity: <u>≈4-6 100LB BAGS</u> 6.0 FT TOP OF BENTONITE Manufacturer: <u>SAKCRETE</u> ANNULAR SPACE SEAL (YES)/NO Type: PORTLAND NEAT CEMENT / BENTONITE TOP OF 20/40 COLORADO SILICA FINE SAND 8.0 FT + 94 lb cement 8.5 FT TOP OF PEA GRAVEL Total Quanity N/A gal Mud Wt: 12-13 lbs/gal Manufacter: HOLMAN CEMENT TYPE 1 / 2 9.5 FT TOP OF SCREEN Quantity: <u>50</u> gallor (bs) (Circle) PER 6" LIFT Hydrated: 1 gal H 9 Time: 2 HOURS Manufacturer: \_\_\_\_\_CETCO -WELL CASING Type: PVC \_\_ Schedule: \_\_\_40 OD: 1 INCH ID: Length/sec: 10,5 FT Flush threaded: (YES) NO Tefton Tape: YES (NO) O-rings: (YES) NO Manufacturer: CRESTLINE PVC / COLORADO ENGINEERING -FILTER PACK Material/Mesh size: AASHTO M43-90 PEA GRAVEL 1/4" Product Name: PEA GRAVEL • bags: BULK Totalibs: \_\_\_\_BULK Manufacturer: ABC LANDSCAPING SCREEN Slotted length: \_\_\_\_\_ 8.0 Type: \_\_\_\_\_ PVC \_\_\_\_ Schedule: \_\_\_\_40 17.0 FT BOTTOM OF SCREEN OD: \_\_\_\_\_\_\_ Length/sec: \_\_\_\_\_\_\_ 8.0 Stot size: \_\_\_\_\_020 \_\_\_ No. slots/ft: \_\_\_-Length from slots to end of section: \_ ≈ .06 FT 18.0 FT Manufacturer: COLORADO ENGINEERING MATERIAL BELOW WELL 1/4" PEA GRAVEL -BOTTOM CAP OR PLUG Type: \_\_\_\_\_ PVC \_\_\_\_ Length: \_\_SLIP CAP FORMATION BELOW WELL SEV. WEATHERED PIERRE Manufacturer: \_\_\_\_CRESTLINE\_PVC\_NSE\_APPROVED STRAIGHTNESS CHECKED OK - YES OR (NO) REFERENCE MEASURING POINT LOCATION/DESCRIPTION: DEPTH TO WATER AFTER COMPLETION: SIGNATURE OF PREPARER NOT TO SCALE

# GAS PROBE MONITORING WELL LF5GP-2 ABOVE GROUND WELL COMPLETION DETAILS



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#### GAS PROBE MONITORING WELL LF5GP-3 ABOVE GROUND WELL COMPLETION DETAILS DRILLING METHOD: 4.25 INCH ID HOLLOW STEM AUGERS PROJECT: LANDFILL 5 DRILLING COMPANY: SITE SERVICES DATE COMPLETED 08/12/97 FIELD GEOLOGIST: J. GILLESPIE LOCATION: FORT CARSON CO DEPTH GROUNDWATER ENCOUNTERED: 8.5 TO 9.0 FT PERMIT NO. PROTECTIVE CASING GUARD POST Type: STEEL Diameter: 4INCH X 4INCH Diameter: 3INCH Locked: YES Key •: 2599 Type: STEEL Length: 5.0 FT Vented Cap YES (NO) - WEEP HOLE Number: 3 QUICK DISCONNECT 4" CONCRETE FOR MONITORING 5781.73 2.5 FT 2-3 DEPTH (ft) GROUND SURFACE ELEV. 5779.08 CONCRETE COLLAR YES/NO Cement: SAKCRETE | Ibs+Water: 6-8 gal Total Quanity: == 4-6 100LB BAGS 3.5 FT TOP OF BENTONITE Manufacturer: SAKCRETE ANNULAR SPACE SEAL (YES)/NO Type: PORTLAND NEAT CEMENT / BENTONITE TOP OF 20/40 COLORADO SILICA FINE SAND Mix: 2-3 Ib bentonite • 6-7 gal H Q 4.5 FT • \_\_\_\_\_\_lb\_cement 5.0 FT TOP OF PEA GRAVEL Total Quanity N/A gal Mud Wt: 12-13 lbs/gal Manufacter: HOLMAN CEMENT TYPE 1 / 2 - BENTONITE SEAL 5.5 FT TOP OF SCREEN Quantity: \_50 gal or (lbs) (Circle) PER 6" LIFT Hydrated: 4 gal H Q Time: 2 HOURS Manufacturer: \_\_\_\_\_CETCO -WELL CASING \_\_\_\_\_ Schedule: \_\_\_\_40 OD: 1 INCH ID: Length/sec: 8.0 FT Flush threaded: (YES)/NO Teflon Tape: YES/NO) O-rings: (YES) NO Manufacturer: \_\_CRESTLINE PVC / COLORADO ENGINEERING -FILTER PACK Material/Mesh size: AASHTO M43-90 PEA GRAVEL 1/4" Product Name: PEA GRAVEL \* bags: BULK Totalibs: BULK Manufacturer: ABC LANDSCAPING SCREEN Slotted length: 3.0 Type: \_\_\_\_\_ PVC \_\_\_\_ Schedule: \_\_\_\_40 BOTTOM OF SCREEN OD: \_\_\_\_\_\_\_\_ Length/sec: \_\_\_\_\_\_\_ 3.0 8.5 FT Slot size: \_\_\_\_\_ No. slots/ft: \_\_\_\_ Length from slots to end of section: 2 .06 FT 9.0 FT Manufacturer: COLORADO ENGINEERING 14 FT TO MATERIAL BELOW WELL = 9.0 FT BENTONITE PELLETS -BOTTOM CAP OR PLUG Type: \_\_\_\_ PVC \_\_\_\_ Length: \_\_\_ SLIP CAP Manufacturer: CRESTLINE PVC NSF APPROVED REMARKS: STRAIGHTNESS CHECKED OK - YES OR (NO) REFERENCE MEASURING POINT LOCATION/DESCRIPTION: DEPTH TO WATER AFTER COMPLETION: SIGNATURE OF PREPARER NOT TO SCALE

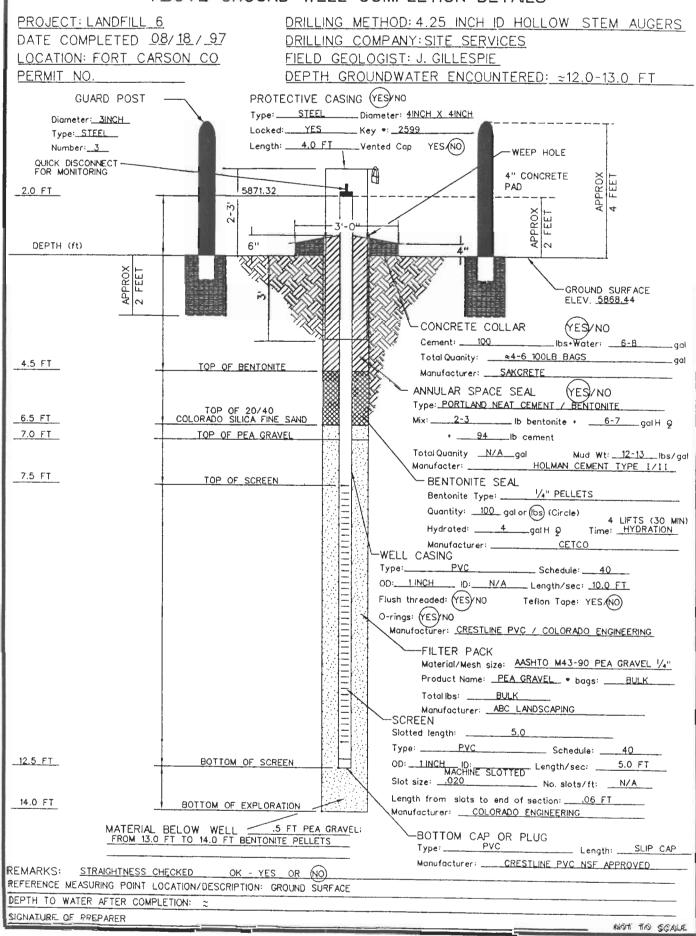
#### GAS PROBE MONITORING WELL LF5GP-4 ABOVE GROUND WELL COMPLETION DETAILS DRILLING METHOD: 4.25 INCH ID HOLLOW STEM AUGERS PROJECT: LANDFILL 5 DRILLING COMPANY: SITE SERVICES DATE COMPLETED \_08/13/97 FIELD GEOLOGIST: J. GILLESPIE LOCATION: FORT CARSON CO DEPTH GROUNDWATER ENCOUNTERED: 14-15 FT PERMIT NO. PROTECTIVE CASING GUARD POST Type: STEE Diameter: 4INCH X 4INCH Diameter: 3INCH Locked: YES Key : 2599 Type:\_STEEL\_ -WEEP HOLE Number: 3 QUICK DISCONNECT -4" CONCRETE PAD 5795.69 2.5 FT\_ 2-3 DEPTH (ft) APPROX 2 FEET GROUND SURFACE ELEV. 5793.22 CONCRETE COLLAR YES/NO Cement: SAKCRETE bs+Water: 6-8 gal Total Quanity: <u>≈4-6 100LB BAGS</u> gal 3.0 FT TOP OF BENTONITE Manufacturer: SAKCRETE ANNULAR SPACE SEAL (YES)/NO Type: PORTLAND NEAT CEMENT / BENTONITE TOP OF 20/40 COLORADO SILICA FINE SAND Mix: 2-3 Ib bentonite • 6-7 gal H Q 4.5 FT • 94 lb cement TOP OF PEA GRAVEL 5.0 FT Total Quanity N/A gal Mud Wt: 12-13 |bs/gal Manufacter: HOLMAN CEMENT TYPE 1 / 2 - BENTONITE SEAL 5.5 FT TOP OF SCREEN Bentonite Type: 1/4" PELLETS Quantity: 50 gal or (bs) (Circle) Hydrated: 4 gal H Q Time: 30 MIN (2 HRS) Manufacturer: \_\_\_\_\_CETCO -WELL CASING Type: <u>PVC</u> \_\_\_\_\_ Schedule: \_\_\_\_40 OD: 1 INCH ID: Length/sec: 8.0 FT Flush threaded: (YES/NO Teflon Tope: YES/NO) O-rings: (YES) NO Manufacturer: CRESTLINE PVC / COLORADO ENGINEERING -FILTER PACK Material/Mesh size: AASHTO M43-90 PEA GRAVEL 1/4" Product Name: PEA GRAVEL • bags: BULK Totallbs: \_\_\_\_BULK Manufacturer: ABC LANDSCAPING -SCREEN Slotted length: 8.5 Type: PVC Schedule: 40 14.0 FT BOTTOM OF SCREEN OD: \_\_1INCH\_\_ID: \_\_\_\_\_ Length/sec: \_\_\_\_\_8.5 Slot size: \_\_\_\_\_\_ No. slots/ft: \_\_\_\_ Length from slots to end of section: z .06 FT 19.0 FT Manufacturer: COLORADO ENGINEERING PEA GRAVEL MATERIAL BELOW WELL PEA .5 FT BENTONITE SEAL 14.5 TO 19 FT -BOTTOM CAP OR PLUG Type: PVC Length: SLIP CAP Manufacturer: CRESTLINE PYC NSF APPROVED REMARKS: STRAIGHTNESS CHECKED OK - YES OR (NO) REFERENCE MEASURING POINT LOCATION/DESCRIPTION: DEPTH TO WATER AFTER COMPLETION: SIGNATURE OF PREPARER NOT TO SCALE

#### GAS PROBE MONITORING WELL LF5GP-5 ABOVE GROUND WELL COMPLETION DETAILS DRILLING METHOD: 4.25 INCH ID HOLLOW STEM AUGERS PROJECT: LANDFILL 5 DRILLING COMPANY: SITE SERVICES DATE COMPLETED 08/13/97 FIELD GEOLOGIST: J. GILLESPIE LOCATION: FORT CARSON CO DEPTH GROUNDWATER ENCOUNTERED: 12-12.5 FT PERMIT NO. PROTECTIVE CASING GUARD POST Type: STEEL Diameter: 4INCH X 4INCH Diameter: 3INCH Locked: YES Key •: 2599 Type: SIEEL Length: 5.0 FT Vented Cap YES (NO) -WEEP HOLE Number: 3 QUICK DISCONNECT FOR MONITORING 4" CONCRETE DAG 5797.06 2.5 FT DEPTH (ft) APPROX 2 FEET GROUND SURFACE ELEV. 5794.55 CONCRETE COLLAR YES/NO Cement: SAKCRETE bs+Water: 6-8 gal Total Quanity: 64-6 100LB BAGS gol 3.0 FT TOP OF BENTONITE Manufacturer: \_\_\_\_SAKCRETE ANNULAR SPACE SEAL (YES)/NO Type: PORTLAND NEAT CEMENT / BENTONITE TOP OF 20/40 COLORADO SILICA FINE SAND Mix: 2-3 | Ib bentonite + 6-7 | gal H | Q 4.5 FT\_ + 94 lb cement TOP OF PEA GRAVEL 5.0 FT Total Quanity N/A gal Mud Wt: 12-13 | lbs/gal Manufacter: HOLMAN CEMENT TYPE 1 / 2 - BENTONITE SEAL 5.5 FT TOP OF SCREEN 1/4" PELLETS Bentonite Type: \_\_\_\_\_ Quantity: \_50 gal or (bs) (Circle) Hydrated: 4 gal H Q Time: 30 MIN (2 HRS) Manufacturer: CETCO -WELL CASING Type: PVC \_\_\_\_\_ Schedule: \_\_\_\_40\_\_\_ OD: 1 INCH ID: Length/sec: 8.0 FT Flush threaded: (YES)'NO Teflon Tape: YES (NO) O-rings: (YES) NO Manufacturer: CRESTLINE PVC / COLORADO ENGINEERING -FILTER PACK Material/Mesh size: AASHTO M43-90 PEA GRAVEL 1/4" Product Name: PEA GRAVEL • bags: BULK Total lbs: BULK Manufacturer: ABC LANDSCAPING -SCREEN 8.5 Slotted length: \_\_\_ Type: PVC Schedule: 40 12.0 FT BOTTOM OF SCREEN OD: \_\_\_\_\_\_ Length/sec: \_\_\_\_\_\_\_ 6.5 Slot size: \_\_\_\_\_\_ No. slots/ft: \_\_\_\_ Length from slots to end of section: \_ ≈ .06 FT 14.0 FT Manufacturer: <u>COLORADO ENGINEERING</u> PEA GRAVEL MATERIAL BELOW WELL : -BOTTOM CAP OR PLUG 12 TO 12.5 FT BENTONITE PELLETS 12,5 TO 14.0 FT Type: \_\_\_\_\_ PVC \_\_\_\_ Length: \_\_\_ SLIP CAP Manufacturer: CRESTLINE PVC NSF APPROVED REMARKS: STRAIGHTNESS CHECKED OK - YES OR (NO) REFERENCE MEASURING POINT LOCATION/DESCRIPTION: DEPTH TO WATER AFTER COMPLETION: SIGNATURE OF PREPARER NOT TO SCALE

#### GAS PROBE MONITORING WELL LF5GP-6 ABOVE GROUND WELL COMPLETION DETAILS DRILLING METHOD: 4.25 INCH ID HOLLOW STEM AUGERS PROJECT: LANDFILL 5 DRILLING COMPANY: SITE SERVICES DATE COMPLETED <u>08/13/97</u> FIELD GEOLOGIST: J. GILLESPIE LOCATION: FORT CARSON CO DEPTH GROUNDWATER ENCOUNTERED: NOT ENCOUNTERED PERMIT NO. PROTECTIVE CASING GUARD POST Type: STEEL Diameter: 4INCH X 4INCH Diameter: 3INCH Locked: YES Key •: 2599 Type: STEEL Length: 5.0 FT Vented Cap YES (NO) -WEEP HOLE Number: 3 QUICK DISCONNECT-FOR MONITORING 4" CONCRETE PAD 5802.60 2.5 FT Ē DEPTH (ft) -GROUND SURFACE ELEV. 5800.17 2 YES/NO CONCRETE COLLAR Cement: SAKCRETE \_\_\_ lbs+Water: \_\_6-8 \_\_\_ gal Total Quanity: <u>≈4-6 100LB BAGS</u> TOP OF BENTONITE Manufacturer: \_\_\_\_SAKCRETE 10.0 FT (YES)/NO ANNULAR SPACE SEAL Type: PORTLAND NEAT CEMENT / BENTONITE TOP OF 20/40 COLORADO SILICA FINE SAND Mix: 2-3 | 1b bentonite + 6-7 gal H Q 12.0 FT • <u>94</u> Ib cement TOP OF PEA GRAVEL 12.5 FT Total Quanity N/A gal Mud Wt: 12-13 lbs/gal Manufacter: HOLMAN CEMENT TYPE 1 / 2 - BENTONITE SEAL 13.5 FT TOP OF SCREEN 1/4" PELLETS Bentonite Type: \_\_\_ Quantity: 50 gal or (bs) (Circle) Hydrated: 4 gal H 9 Time: 30 MIN (2 HRS) Manufacturer: CETCO -WELL CASING PVC Schedule: 40 OD: 1 INCH ID: Length/sec: 16.0 FT Flush threaded: (YES) NO Teflon Tape: YES (NO) O-rings: (YES) NO Manufacturer: \_\_CRESTLINE PVC / COLORADO ENGINEERING -FILTER PACK Material/Mesh size: AASHTO M43-90 PEA GRAVEL 1/4" Product Name: PEA GRAVEL • bags: BULK Manufacturer: ABC LANDSCAPING Slotted length: 10.0 Type: \_\_\_\_\_ PVC \_\_\_\_ Schedule: \_\_\_\_ 40 OD: 1 INCH ID: Length/sec: 10.0 23.5 FT BOTTOM OF SCREEN Slot size: \_\_\_\_\_020 \_\_ No. slots/ft: \_\_ Length from slots to end of section: \_ z .06 FT 24.0 FT Manufacturer: COLORADO ENGINEERING MATERIAL BELOW WELL PEA GRAVEL -BOTTOM CAP OR PLUG 5 FT MATERIAL DARK OLIVE GRAY PLASTIC CLAY Type: PVC Length: SLIP CAP MATERIAL BOE Manufacturer: CRESTLINE PVC NSF APPROVED REMARKS: STRAIGHTNESS CHECKED OK - YES OR (NO) REFERENCE MEASURING POINT LOCATION/DESCRIPTION: DEPTH TO WATER AFTER COMPLETION: SIGNATURE OF PREPARER NOT TO SCALE

#### GAS PROBE MONITORING WELL LF6GP-1 ABOVE GROUND WELL COMPLETION DETAILS PROJECT: LANDFILL 6 DRILLING METHOD: 4.25 INCH ID HOLLOW STEM AUGERS DATE COMPLETED 08/18/97 DRILLING COMPANY: SITE SERVICES LOCATION: FORT CARSON CO FIELD GEOLOGIST: J. GILLESPIE PERMIT NO. DEPTH GROUNDWATER ENCOUNTERED: ≈9.0 FT GUARD POST PROTECTIVE CASING Type: STEEL Diameter: 4INCH X 4INCH Diameter: 3INCH Locked: YES Key •: 2599 Type: STEEL Length: 4.0 FI Vented Cap YES(NO) Number: 3 -WEEP HOLE QUICK DISCONNECT -4" CONCRETE 5868.31 2.0 FT 3 DEPTH (ft) APPROX 2 FEET -GROUND SURFACE ELEV, <u>5866.1</u>5 CONCRETE COLLAR (YES)/NO Cement: 94 | bs+Water: 6-8 Total Quanity: <u>≈4-6 100LB BAGS</u> 2.0 FT TOP OF BENTONITE Manufacturer: SAKCRETE ANNULAR SPACE SEAL (YES)/NO Type: PORTLAND NEAT CEMENT / BENTONITE TOP OF 20/40 COLORADO SILICA FINE SAND Mix: 2-3 Ib bentonite • 6-7 gal H Q3.0 FT 3.5 FT + 94 lb cement TOP OF PEA GRAVEL Total Quanity N/A gal Mud Wt: 12-13 lbs/gal Manufacter: HOLMAN CEMENT TYPE I/II Wanufacter: \_\_\_\_\_\_ → BENTONITE SEAL | '/- PELLETS 4.0 FT TOP OF SCREEN Quantity: \_50 gal or (bs) (Circle) 2 LIFTS (30 MIN) Hydrated: 2 gal H 9 Time: HYDRATION Manufacturer: CETCO -WELL CASING Type: \_\_\_\_\_ PVC \_\_\_\_ Schedule: \_\_\_40 OD: 1 INCH ID: Length/sec: 6.0 FT Flush threaded: (YES) NO Teflon Tape: YES (NO) O-rings: (YES) NO Manufacturer: CRESTLINE PVC / COLORADO ENGINEERING -FILTER PACK Material/Mesh size: AASHTO M43-90 PEA GRAVEL 1/4" Product Name: PEA GRAVEL • bags: BULK Totalibs: BULK Manufacturer: ABC LANDSCAPING -SCREEN 4.0 Slotted length: \_ PVC Schedule: 40 8.0 FT OD: 1 INCH D: Length/sec: 4.0 BOTTOM OF SCREEN Slot size: \_.020 No. slots/ft: \_\_\_ Length from slots to end of section: \_ ≈ .06 FT 13.0 FT BOTTOM OF EXPLORATION Manufacturer: COLORADO ENGINEERING -BOTTOM CAP OR PLUG Type: \_\_\_\_\_ PVC \_\_\_\_ Length: \_\_\_ SLIP CAP Manufacturer: \_\_\_\_\_CRESTLINE\_PVC\_NSF\_APPROVED REMARKS: STRAIGHTNESS CHECKED OK - YES OR (NO) REFERENCE MEASURING POINT LOCATION/DESCRIPTION: GROUND SURFACE DEPTH TO WATER AFTER COMPLETION: 2 SIGNATURE OF PREPARER NOT TO SCALE

# GAS PROBE MONITORING WELL LF6GP-2 ABOVE GROUND WELL COMPLETION DETAILS



#### GAS PROBE MONITORING WELL LF6GP-3 ABOVE GROUND WELL COMPLETION DETAILS PROJECT: LANDFILL 6 DRILLING METHOD: 4.25 INCH ID HOLLOW STEM AUGERS DATE COMPLETED 08/18/97 DRILLING COMPANY: SITE SERVICES FIELD GEOLOGIST: J. GILLESPIE LOCATION: FORT CARSON CO DEPTH GROUNDWATER ENCOUNTERED: ≈12.0-13.0 FT PERMIT NO. PROTECTIVE CASING (YES) NO GUARD POST Type: STEEL Diameter: 4INCH X 4INCH Diameter: 3INCH Locked: YES Key \*: 2599 Type: STEEL Length: 4.0 FT Vented Cap YES(NO) Number: 3 -WEEP HOLE QUICK DISCONNECT FOR MONITORING 4" CONCRETE PAD 5871.15 2.0 FT DEPTH (ft) GROUND SURFACE ELEV. 5868.34 (YES)/NO CONCRETE COLLAR \_\_ lbs•Water: \_\_\_6-8\_\_ Cement: \_\_\_\_100 Total Quanity: \$\infty 4-6 100LB BAGS qat 4.5 FT TOP OF BENTONITE Manufacturer: SAKCRETE ANNULAR SPACE SEAL (YES)/NO Type: PORTLAND NEAT CEMENT / BENTONITE TOP OF 20/40 COLORADO SILICA FINE SAND 6.5 FT Mix: 2-3 lb bentonite • 6-7 gal H $\odot$ + \_\_\_\_94 \_\_\_tb cement 7.0 FT TOP OF PEA GRAVEL Total Quanity N/A gal Mud Wt: 12-13 |bs/agl Manufacter: HOLMAN CEMENT TYPE 1/11 7.5 FT - BENTONITE SEAL TOP OF SCREEN Quantity: \_\_100\_ gal or (bs) (Circle) Hydrated: 4 gal H Q Time: @30 MIN INTRVAL Manufacturer: \_\_\_\_\_\_CETCO Type: PVC \_\_ Schedule: \_\_\_40\_\_\_ OD: 1 INCH ID: N/A Length/sec: 10.0 FT Flush threaded: (YES)NO Teflon Tape: YES (NO) O-rings: (YES)NO Manufacturer: CRESTLINE PVC / COLORADO ENGINEERING Material/Mesh size: AASHTO M43-90 PEA GRAVEL 1/4" Product Name: PEA GRAVEL • bags: BULK Totalibs: \_\_\_\_BULK\_ Manufacturer: ABC LANDSCAPING -SCREEN 5.0 Slotted length: \_\_\_ PVC Schedule: 40 12.5 FT OD: 1INCH D: Length/sec: 5.0 FT BOTTOM OF SCREEN Slot size: .020 INCH No. slots/ft: N/A Length from slots to end of section: \_\_\_\_.06\_FT 14.0 FT BOTTOM OF EXPLORATION Manufacturer: COLORADO ENGINEERING MATERIAL BELOW WELL .5 FT OF PEA GRAVEL: FORM 13.0 FT TO 14.0 FT BENTONITE PELLETS -BOTTOM CAP OR PLUG Type: \_\_\_\_ PVC \_\_\_\_ Length: \_\_\_ SLIP CAP Manufacturer: CRESTLINE PVC NSE APPROVED REMARKS: STRAIGHTNESS CHECKED OK - YES OR (NO) REFERENCE MEASURING POINT LOCATION/DESCRIPTION: GROUND SURFACE DEPTH TO WATER AFTER COMPLETION: ≈ SIGNATURE OF PREPARER NOT TO SCALE

#### GAS PROBE MONITORING WELL LF6GP-4 ABOVE GROUND WELL COMPLETION DETAILS PROJECT: LANDFILL 6 DRILLING METHOD: 4.25 INCH ID HOLLOW STEM AUGERS DATE COMPLETED 08/19/97 DRILLING COMPANY: SITE SERVICES LOCATION: FORT CARSON CO FIELD GEOLOGIST: J. GILLESPIE PERMIT NO. DEPTH GROUNDWATER ENCOUNTERED: ≈10.5-12.0 FT PROTECTIVE CASING (YES) NO GUARD POST Type: STEEL Diameter: 4INCH X 4INCH Diameter: 3INCH Locked: YES Key •: 2599 Type: STEEL Length: 4.0 FT Vented Cap YES(NO) Number: 3\_ -WEEP HOLE QUICK DISCONNECT FOR MONITORING 4" CONCRETE 5872.32 2.0 FT 2-3 DEPTH (ft) GROUND SURFACE ELEV. 5869.60 CONCRETE COLLAR (YES)/NO Cement: \_\_\_\_100\_\_\_\_ \_\_ lbs+Water: \_\_6-8\_\_ Total Quanity: ≥4-6 100LB BAGS 2.0 FT TOP OF BENTONITE Manufacturer: \_\_\_\_SAKCRETE (YES)/NO ANNULAR SPACE SEAL Type: PORTLAND NEAT CEMENT / BENTONITE TOP OF 20/40 COLORADO SILICA FINE SAND 3.0 FT Mix: 2-3 | b bentonite + 6-7 | gal H Q • 94 lb cement TOP OF PEA GRAVEL 3.5 FT Total Quanity N/A gal Mud Wt: 12-13 |bs/gal Manufacter: HOLMAN CEMENT TYPE [/][ 4.0 FT TOP OF SCREEN BENTONITE SEAL Bentonite Type: \_\_\_\_\_\_'/4" PELLETS Quantity: \_\_50\_\_ gal or (bs) (Circle) Hydrated: 2 gal H Q Time: @30 Min INTRVAL Manufacturer: CETCO -WELL CASING Type:\_\_\_\_PVC \_\_ Schedule: \_\_\_40\_\_ OD: 1 INCH ID: N/A Length/sec: 6.0 FT Flush threaded: (YES) NO Teflon Tape: YES (NO) O-rings: (YES) NO Manufacturer: CRESTLINE PVC / COLORADO ENGINEERING -FILTER PACK Material/Mesh size: AASHTO M43-90 PEA GRAVEL 1/4" Product Name: PEA GRAVEL • bags: BULK Totalibs: \_\_\_\_\_BULK Manufacturer: ABC LANDSCAPING SCREEN Slotted length: \_\_ 4.5 PVC \_\_\_ Schedule: \_\_\_\_40 8.5 FT BOTTOM OF SCREEN OD: \_\_1.NCH\_\_O: \_\_\_\_\_Length/sec: \_\_\_\_\_4.5 FT Slot size: \_\_020 INCH \_\_\_\_ No. slots/ft: N/A Length from slots to end of section: \_\_\_\_.06 FT 15.0 FT BOTTOM OF EXPLORATION Manufacturer: <u>COLORADO ENGINEERING</u> MATERIAL BELOW WELL .5 FT OF PEA GRAVEL; FROM 9.0 FT TO 15.0 FT BENTONITE PELLETS -BOTTOM CAP OR PLUG Type: \_\_\_\_ PVC \_\_\_\_ Length: \_\_SLIP CAP Manufacturer: \_\_\_\_CRESTLINE\_PVC\_NSF\_APPROVED REMARKS: STRAIGHTNESS CHECKED OK - YES OR NO REFERENCE MEASURING POINT LOCATION/DESCRIPTION: GROUND SURFACE DEPTH TO WATER AFTER COMPLETION: 2 SIGNATURE OF PREPARER WIDT TO SCALE

